

Labour Force, Employment and Unemployment  
in a Backward Economy : A Study of  
Kumaon Region in U. P.

**THESIS**

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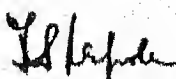
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This is to certify that the enclosed Thesis entitled "Labour Force, Employment and Unemployment in a Backward Economy : A Study of Kumaon Region in U.P.", embodies the work of the candidate, Shri S.S. Khanka himself and that he worked under my supervision to complete his study for the period required under Ordinance 6. It is further certified that he has put in more than 200 days of attendance at the Giri Institute of Development Studies, a recognised centre for Ph.D. of the University, to work under my supervision.

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This is to certify:

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## P R E F A C E

Development of an economy largely depends upon the available quantum of infrastructure, resources, technology and skill. The peculiar geographical conditions and the undulating nature of terrain of the hill areas of the Kumaon region impose severe constraints on growth of economic activities, on the one hand, and on the efficacy of infrastructural facilities, on the other. The failure of employment opportunities to develop pari passu with the rapid increase in the population has, thus, resulted in the problems of unemployment and under-employment. The need for a large scale programmes of creating productive employment opportunities in the region, is, therefore, obvious not only for raising income levels of its population but also to prevent a further decline in the productive capacity of its population. It is in this direction of assessing the extent, problems and possibilities of effective utilization of human resources that we have undertaken the present study of labour force, employment and unemployment in the Kumaon region of Uttar Pradesh.

In the process of undertaking this study, I have incurred various kinds of debts to several persons and organisations. My greatest debt is due to Dr. T.S. Papola, my Ph.D. supervisor. I do not know how to express my profound gratitude to him who inspite of his tight schedule spared time for my work and whenever I approached him, I was immensely benefited by his wise counsel and guidance and inspiring goadings. I am also grateful to Dr. T.D. Joshi, my Ph.D. Co-supervisor, for his incessant encouragement and advice to complete the work.

Completion of this study would probably not have been possible, without being able to work on it full time for about a year at the Giri Institute of Development Studies, Lucknow which was made possible by the award of a short-term Fellowship for 9 months by the Indian Council of Social Science Research, New Delhi. I am, therefore, extremely grateful to the ICSSR for their very timely and useful assistance. I am also grateful to the Kumaon University, Nainital, i.e., my employer University, for sanctioning me leave to avail the aforesaid Fellowship and also to the Giri Institute of Development Studies, Lucknow for providing me the facilities in connection with the Fellowship. My particular thanks are due to the Library Staff of the Institute for the timely and willingly help in making available the necessary material and reference for this study.

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Needless to say, the author holds himself responsible for any blemishes the study may suffer from.

*SSK Khanka*

(SHOBHAN SINGH KHANKA)

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## Chapter I

### INTRODUCTION : SCOPE AND METHOD

#### 1.1 The Problem

Rapid growth of population is a fundamental problem faced by most under-developed countries in the course of their efforts for economic development. Population increase is found to off-set most of the gains these countries are able to make in their size of output and incomes, thus leaving very little for net improvement in the conditions of life and for further development. India is a typical case characterised by such predicament. In India, population has increased at an unprecedented rate particularly since 1951 onwards. A rapid growth in the labour force has been a natural consequence of the rapid increase in population. But the growth of employment opportunities has lagged far behind; and the result has been a high and increasing extent of unemployment, which has emerged as one of the major economic and social problems of the country to-day. The major burden of the growing population has fallen on agriculture, as that is the occupation of the majority of the labour force main source of livelihood of population. As already a larger than necessary number of workers are already engaged in agriculture working



on the limited land resources, the additional workers produce only a lower level of output and income. As a result, the capacity of this sector to absorb additional labour has become progressively limited.<sup>1</sup> Consequently, the rural labour force suffers from under-employment, and considerable sections live in abject poverty depending upon only seasonal employment, or trek to the urban areas in search of work.

On the other hand, the non-agricultural and urban sectors have also not grown fast enough to absorb the increasing local labour force and the rural migrants. Besides slow growth, the technological changes in some of the urban occupations particularly industry, have also been of the pattern which not only reduce the rate of labour absorption but also involve displacement of a fraction of the work force in some cases. The unemployment problem has thus not only continued unabated, but have got accentuated rapidly over the period.

The relatively backward areas face this predicament naturally with greater intensity, as the growth of population

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<sup>1</sup> 'Report of the Committee on Unemployment', 1972 of India, Ministry of Labour and Rehabilitation of Labour and Employment), op. cit., p.8.



and labour force is equally high while opportunities for growth of productive employment are relatively less in such regions. If a region also happens to have unfavourable geographical characteristics and deficiency of endowment for growth the problem becomes more precarious. The hill region of Uttar Pradesh represents one such special case of under-development. The region has remained insulated from the full impact of development activities on account of its special problems.<sup>2</sup> Its peculiar geographical conditions and the undulating nature of the terrain impose severe constraints on growth of economic activities, on the one hand, and on the development of infrastructural facilities, on the other. In Kumaon region,<sup>3</sup> with which we will be concerned in this study, out of every 10 persons 8 are engaged in primary sector and heavy dependence on this sector itself is a mark of economic backwardness. Development of agriculture is severely handicapped by such inherent constraints as tiny and scattered landholdings, lack of irrigation facilities,

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<sup>2</sup> Planning Department, Government of U.P., Draft Sixth Five Year Plan 1980-85, (Review) Vol.I, p.127.

<sup>3</sup> The hill region of U.P. consists of eight districts : Almora, Pithoragarh and Nainital (constituting Kumaon Division) and Garhwal, Tehri, Uttarkashi, Chamoli and Dehradun (constituting Garhwal Division).

and the consequent non-applicability of HYV seeds and chemical fertilizers. As a result, the agricultural productivity has remained at a low level. On the other hand, the non-agricultural activities particularly the directly productive manufacturing sector is almost non-existent. The percentage of workers engaged in manufacturing sector accounts for less than 4 per cent in the Kumaon as against the State average of 10 per cent. The under-developed primary and secondary sectors obviously means a low productive base of the regional economy. No doubt, after agriculture the biggest purveyor of employment in the hill area is the 'amorphous services sector' which is an euphemism for government jobs, and positions in the State added institutions. As such, its capacity to catalyse development of productive base of the region's economy is circumspect.

In fact, one of the basic reasons of backwardness of the region with large hilly tracts is the problem of accessibility of the remote and isolated areas. Roads which are the only life-lines in the region cannot possibly be extended to each settlement and area, due to the exorbitant cost of construction of roads in a difficult mountaneous terrain. Thus lack of transport holds back the region from taking benefits of whatever natural advantage it has in terms of forest, mineral and climatic resources. As against U.P.'s

192 km. road length per thousand sq.km. area, the hill region had 105 km. per thousand sq.km. in 1978-79.<sup>4</sup> The settlements are mostly tiny, scattered and many a time isolated from each other. Larger settlements of towns and cities, which could act as one kind of catalytic agents for development are few. This is well reflected in the very low level of urbanisation in the region. The proportion of urban to total population in Kumaon region is 16 per cent; and, in Almora and Pithoragarh, the two entirely hilly districts of the region, it is as low as 6 per cent and 5 per cent respectively, as against 18 per cent of the state of Uttar Pradesh.

The low levels of agricultural productivity and relative lack of productive employment opportunities in the secondary and tertiary sectors have produced two inevitable consequences on the structure of labour force. First, there prevails unemployment, particularly, a high degree of under-employment. The other consequence of backwardness has been a high rate of out-migration from the region which, being a selective process, has denuded the region of male workers.

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<sup>4</sup> 'Development Indicators of Uttar Pradesh', 1980, State Planning Institute, Economic and Statistics Division, Uttar Pradesh, pp.81-82.

skills and entrepreneurship.<sup>5</sup> As a result, there is high ratio of females and of children and old persons in the population. These adverse features of the labour force have tended to reduce the productive capacity of manpower in the region to a large extent.

Thus, the Kumaon region of Uttar Pradesh presents a special case of economic backwardness, in terms of its low and precarious resource base, difficulties of application of modern technologies on a large scale and special characteristics of its labour force. The need for a large scale programmes of creating productive employment opportunities in the region is obvious not only for raising income levels of its population but also to prevent a further decline in the productive capacity of its population. An examination of the possibilities, and consequences of such programmes, would, however, be much better facilitated if a detailed and analytical study of the trends and composition of the labour force, in its demographic and occupational aspects and of the relative employment generating potential of different activities is undertaken. It is in this direction that the present study aims at making a modest contribution.

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<sup>5</sup> 'Integrated Natural and Human Resource Planning and Management in the Hills of U.P.', Part I, G.B. Pant Krishi Evam Praudyogik Vishwavidyalaya, Pantnagar (Nainital), September, 1982, p.2.



## 1.2 Objectives of the Study

The issues of development and employment especially in a backward region are highly complex and intricate. It is not possible to examine them in their entirety in an individual study. The aims and the scope of the present study are, therefore, inevitably limited to some major aspects of population, employment and unemployment. The specific objectives we have set for ourselves in the present study are as follows:

i) Since the questions of employment and unemployment are derived, to a major extent, from the dynamics of population change, the first task of our study consists of an examination of the trends and composition of population, and its derivative labour force. This examination obviously includes an analysis of the trends and components of population growth, its age and sex composition, and labour force participation rates.

ii) Occupational structure of labour force and changes therein reflect the level and pace of development of an economy. Structural changes in labour force leading a reduction in the proportion engaged in the primary and increase in those employed in the secondary and tertiary sectors, is supposed to characterise the process of development. From this point of view, the next important aspect



we examine, concerns the shifts in the occupational structure of labour force, i.e., changes in the proportion of employment in the primary, secondary and tertiary sectors.

iii) Since unemployment is postulated as a major problem of underdevelopment, we then look at the nature and extent of unemployment in its various aspects by such as distribution of the unemployed by sex, age, rural-urban location and levels of education. Since a predominantly agricultural economy is beset more with the problem of under-employment, rather than open unemployment, we have also attempted a measure of this phenomenon.

iv) As stated earlier, a special consequence of the economic backwardness of the economy of the region is out-migration of able - bodied young population to eke-out their livelihood and to support those left behind. Therefore, the other important aspect examined in the study is the nature and extent of out-migration alongwith its consequences on the structure of population and labour force, its impact on production and productivity.

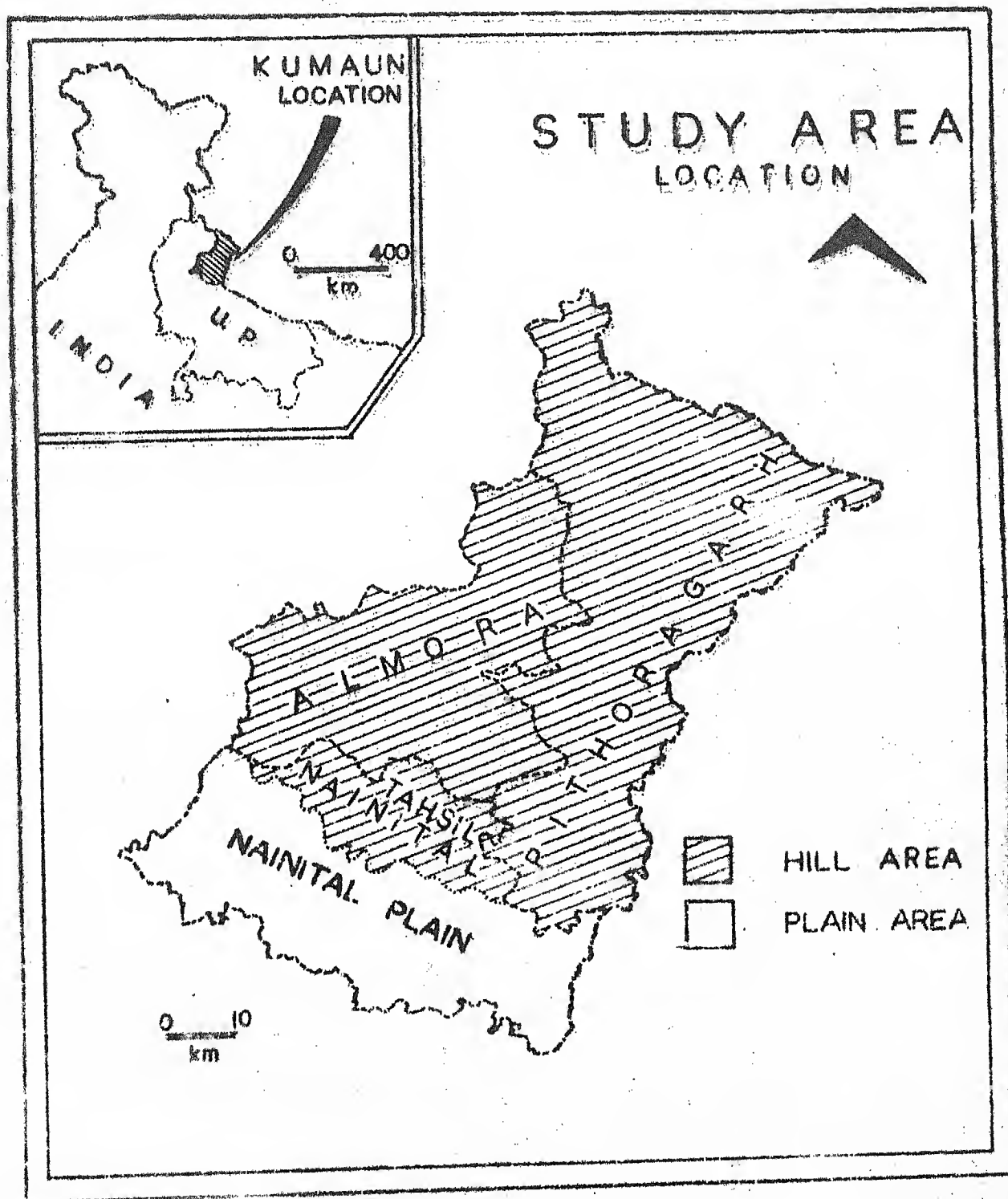
v) Having analysed structure of labour force, unemployment and migration, we finally examine the existing

pattern and potential of productive employment opportunities in the region. Here, the two productive sectors, namely, agriculture and industry have been studied in their various aspects.

### 1.3 Scope and Method

#### a. The Locale of the Study

As stated earlier, the study is limited to the Kumaon division of the State of Uttar Pradesh. It is in order at this stage to describe a few major and salient features of the region. The Kumaon region comprises the entirely hilly districts of Almora and Pithoragarh and Nainital district part of which is hilly and another part in the plains. The region is the northern-most part of Uttar Pradesh. To the north of the region lies lofty Himalayas, to the east Nepal, while Garhwal region lies to its west and the plains of tarai and bhabar to the south. It extends between  $28^{\circ}27'$  to  $30^{\circ}27'$  north latitude and  $70^{\circ}48'$  to  $81^{\circ}30'$  east longitude. Its population according to the 1981 Census was 23,58,785 (males 12,01,112 and females 11,57,673) and area 21,032 sq. kms., which constitute 2.13 per cent and 7.14 per cent respectively of the total population and area of the State.



Topographically, about 87 per cent of total area of the region is covered by the mountains whereas only 13 per cent area belongs to the plains. Consequently, in the Kumaon region as a whole, only around 16 per cent of total reporting area is under cultivation. This proportion is still lower in Almora (14 per cent) and Pithoragarh (8 per cent) districts. About 50 per cent of the area is under forests. Similarly percentage of net area irrigated to net area cultivated accounts for 39 per cent for the region as a whole, but it is barely 10 per cent and 9 per cent in the hill districts, Almora and Pithoragarh respectively. Occupational structure is overwhelmingly lopsided and skewed in favour of the primary sector in which 78 per cent of total workers are engaged.

In fact, the plain portion of Nainital district is a developed area and when included in analysis tends to distort the regional profile as a whole. Backwardness and under-development is, however, a universal characteristic of the entire hilly parts of Kumaon. Although our study covers the whole Kumaon division, yet, 'in order to make the study more pertinent to the backward economy, separate analysis for hill and plains part of the region has been attempted wherever data permitted.



b. Data Base and Methodology

The present study is mainly based on secondary data. Although data source are indicated in the respective chapters, we give below general account of the major sources of data on different aspects studied.

Population and Labour Force : All the data regarding population and labour force are collected from the Census of India publications.

Unemployment : These data are collected from the Census of India, National Sample Survey and, Employment Exchanges.

Migration : Data on migration are compiled from the Census of India.

Agricultural and Industrial Sectors : Census of India, Agricultural Census, and State Organisations and Departments, viz., Directorate of Agriculture, Board of Revenue and Horticulture Department are the source of data used regarding agriculture. The respective data on industry are collected from Census of India, Annual Survey of Industries, and Tourism and Industry Departments of the State Government.

Besides, data on some other aspects are also collected from 'Development Indicators of Uttar Pradesh' published by State Planning Institute, Economics and Statistics Division, Lucknow.

To investigate into certain questions relating to unemployment and migration for which secondary data are not adequate, we also conducted a small survey in 4 villages in Pithoragarh. As per indices of economic development, Pithoragarh district ranks as the most backward in the region. We, therefore, decided to undertake the primary survey in this district - Four villages were purposively selected for the survey keeping the following characteristics in mind : i) nearness to road and availability of some urban amenities, ii) remoteness from the road and modern amenities, iii) coexistence of both general and scheduled castes population, and iv) availability or otherwise of irrigation facilities. The four selected villages had a total of 200 households all of whom were surveyed. A structured questionnaire was used to collect data from the households. It contained, besides, questions on general characteristics of the households, mainly questions for a relatively detailed enquiry regarding conditions of employment and unemployment, and migration. The questionnaire used is given as Appendix IX.

#### 1.4 Major Concepts Used

Labour force and Migration are such two concepts used at length in our study, which need to be defined at this stage. Other concepts such as unemployment and under-employment are explained in the chapters dealing with these phenomenon.

a. Labour Force : The concept of labour force used in the present study is the same as in the Census of India, with appropriate possible adjustments. The definition of workers, and therefore labour force has varied from Census to Census as briefly explained in the following paragraphs.

1951 Census : In the 1951 Census, the definition of workers is based on 'income concept'. Accordingly, workers refer to earners and earning dependents. Excluded from the category of worker were those income receivers and their dependents who reported non-cultivating ownership of land and agricultural rent, as the only means of their livelihood. An earner is one whose earning is sufficient at-least for his/her own maintenance. While an earning dependent is one who earns money or money equivalent but that is not sufficient for his/her own maintenance.

1961 Census : In the 1961 Census, the 'income' concept was given up and 'work' concept adopted to define a person as a worker. To qualify as a worker in the 1961 Census, all that was necessary was to be engaged in some economic activity, howsoever, marginal or secondary one's participation. Even if a person put in an hour's work a day during the reference week, he/she was regarded as a worker. Obviously, the definition of worker in the 1961 Census was on the liberal side.

1971 Census : A rather strict definition of worker was adopted in the 1971 Census. According to the 1971 Census, a worker is a person whose main activity is participation in any economically productive work by his physical or mental activity. Work involves not only actual work but effective supervision and direction of work.

1981 Census : The 1981 Census definition of worker broadly coincides with definition of worker as adopted in the 1961 Census. The workers are, however, divided into 'main' and 'marginal' categories. Main workers are those who worked more than 183 days during the last year and those who worked less than 183 days during the same period



are regarded as marginal workers.<sup>6</sup> The 'main' workers broadly are coterminous with the 'worker' concept of the 1971 Census.

The details of adjustments, wherever made for inter-Census comparison are given at appropriate places.

b. Migration : For defining a migrant we have used the concept used by Census of India. If the place of enumeration of a person is not the place of his birth, he is called a migrant. A person is an 'out-migrant' from the place of origin and 'immigrant' to the place of residence. While the Census methodology permits only indirect estimation of out-migration on the basis of aggregation of immigrants in different places reporting a district as their place of origin, in our primary survey we attempted a direct measure of outmigration from the villages. Information was sought about all persons living away from the family but for the analysis of the Census and consequences of migration, we included only those migrants who moved outside the village in search of job.

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<sup>6</sup> Census of India, 1981, Uttar Pradesh, Paper 1 of 1981 Supplement, Provisional Population Totals, p.8.

### 1.5 Chapter Scheme

The presentation of analysis and findings of the present study are organised in eight chapters as detailed below. After dealing with formulation of the problem, scope and method of the study in the present chapter, we devote Chapter 2 to the analysis of dynamics of population growth and labour force. In Chapter 3, we examine nature and extent of unemployment. Alongwith this, an attempt has also been made to measure the incidence of under-employment in agriculture. Chapter 4 examines nature and extent of out-migration and also the impact of out-migration on the economy of the household sending out-migrants. Chapter 5 attempts to examine changes in the proportions and structure of employment in the three major sectors of the economy, viz., primary, secondary and tertiary. In Chapters 6 and 7, we attempt to examine the labour absorption capacity of productive sectors - agriculture and industry, respectively. Finally, the main findings of the study have been summarised to arrive at broad conclusions and suggestions regarding the problems of employment and unemployment in the region of study, in Chapter 8.

## Chapter II

### GROWTH OF POPULATION AND LABOUR FORCE : 1951-81

#### 2.1 Population Growth in India, Uttar Pradesh and the Kumaon Region : 1901-81

The phenomenon of a high growth rate of population has been a common characteristic of almost all the developing countries during the recent decades. In fact, population increase is one of the important factors to which poverty of these countries is attributable. India is the second most populous country in the world after the People's Republic of China. India's population is larger than the combined population of Bangladesh, Indonesia, North Vietnam, Burma, Malaysia, Pakistan, Philippines, Thailand and Sri Lanka.<sup>1</sup> The population of India has been increasing rapidly for the last several decades. It was 23.83 crore in 1901, 54.79 crore in 1971 and reached 68.4 crore as on April 1, 1982.<sup>2</sup> Thus during the eight decades of the present

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<sup>1</sup>World Population Data Sheet of the Population Reference Bureau, 1975.

<sup>2</sup>Census of India, 1981, Series-1, India Paper 1 of 1981, Provisional Population Totals, op. cit., 52.

century, the total population has increased by about 200 per cent. In fact, right from a hamlet to the nation, the population has witnessed a sustained rising trend over this period. This trend of rapid population growth has also been observed with equal force in Uttar Pradesh and Kumaon Region, as can be seen from a glance at figures in Table 2.1. Of the eight decades, 1911-21 was the only one which registered a decline in the country's population, though in Uttar Pradesh, decline was also experienced during the preceding decade. But, despite a decline in State's population, Kumaon region experienced a significantly high growth, higher than in the country as a whole, in its population. A decline in population was experienced in all three cases, India, U.P. and Kumaon during 1911-21. Severe famines and epidemics in the years preceding the Census 1921 of which the most devastating was the nationwide influenza epidemic of 1918 estimated to have claimed about 2 crore lives, were responsible for the decline in population during 1911-21.<sup>3</sup> The First World War also made its own contribution to this phenomenon. It is, however,

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<sup>3</sup>Davis, Kingsley, The Population of India and Pakistan, Princeton University Press, 1951, p.237.



Table 2.1 : Population Growth in India, Uttar Pradesh and Kumaon Division From 1901 to 1981

Census Year	INDIA			UTTAR PRADESH			KUMAON REGION		
	Popula- tion (in crores)	Decennial (+) or decrease (-) (in crores)	% in- crease (+) or decrease (-) du- ring the decade	Popula- tion (in crores)	Decennial (+) or decrease (-) (in crores)	% in- crease (+) or decrease (-) during the decade	Popula- tion (in lakhs)	Decennial (+) or decrease (-) (in lakhs)	% in- crease (+) or decrease (-) during the decade
1901	23.6			4.86			7.74		
1911	25.2	(+) 1.6	(+) 5.7	4.81	(-) 0.05	(-) 0.97	8.45	(+) 0.71	(+) 9.17
1921	25.1	(-) 0.1	(-) 0.3	4.67	(-) 0.14	(-) 3.08	8.04	(-) 0.41	(-) 4.85
1931	27.9	(+) 2.8	(+) 11.0	4.98	(+) 0.31	(+) 6.60	8.57	(+) 0.53	(+) 6.59
1941	31.9	(+) 4.0	(+) 14.2	5.65	(+) 0.67	(+) 13.57	9.76	(+) 1.19	(+) 13.88
1951	36.1	(+) 4.2	(+) 13.3	6.32	(+) 0.67	(+) 11.82	11.05	(+) 1.29	(+) 13.21
1961	43.9	(+) 7.8	(+) 21.5	7.37	(+) 1.05	(+) 16.66	14.71	(+) 3.66	(+) 33.12
1971	54.8	(+) 10.9	(+) 24.8	8.83	(+) 1.46	(+) 19.79	18.54	(+) 3.83	(+) 26.04
1981*	68.4	(+) 13.6	(+) 24.8	11.09	(+) 2.26	(+) 25.49	23.86	(+) 5.32	(+) 28.69

\* Provisional

Sources : i) Census of India, 1971, General Population Tables.

ii) Census of India, 1981, Uttar Pradesh, Paper 1 of 1981 Supplement, Provisional Population Totals.

intriguing to note that the incidence of decline in population was higher in Kumaon than in U.P. as a whole and very much higher in U.P. and Kumaon as compared to the country as a whole. It seems that the above factors produced a relatively higher impact in U.P. and further higher in Kumaon, than in the country as a whole.

Overall, population growth upto 1921 was very slow, after which there has been an acceleration in growth rate. The year 1921 has, therefore, been called the "Great Divide" in the history of Indian population. It, however, seems that the 'Divide' in fact arrived in U.P. and Kumaon in the 1931, till when the growth of population continued to be low. The most phenomenal increase in population has, however, been experienced after 1951 everywhere, in India, U.P. and Kumaon. That is an important reason for our concentrating on the period 1951-81 for the purposes of our analysis of population growth.

## 2.2 Growth of Population in the Three Districts of Kumaon Division from 1951 to 1981

Population of the Kumaon region has shown a bigger spurt than India and Uttar Pradesh, during the last three

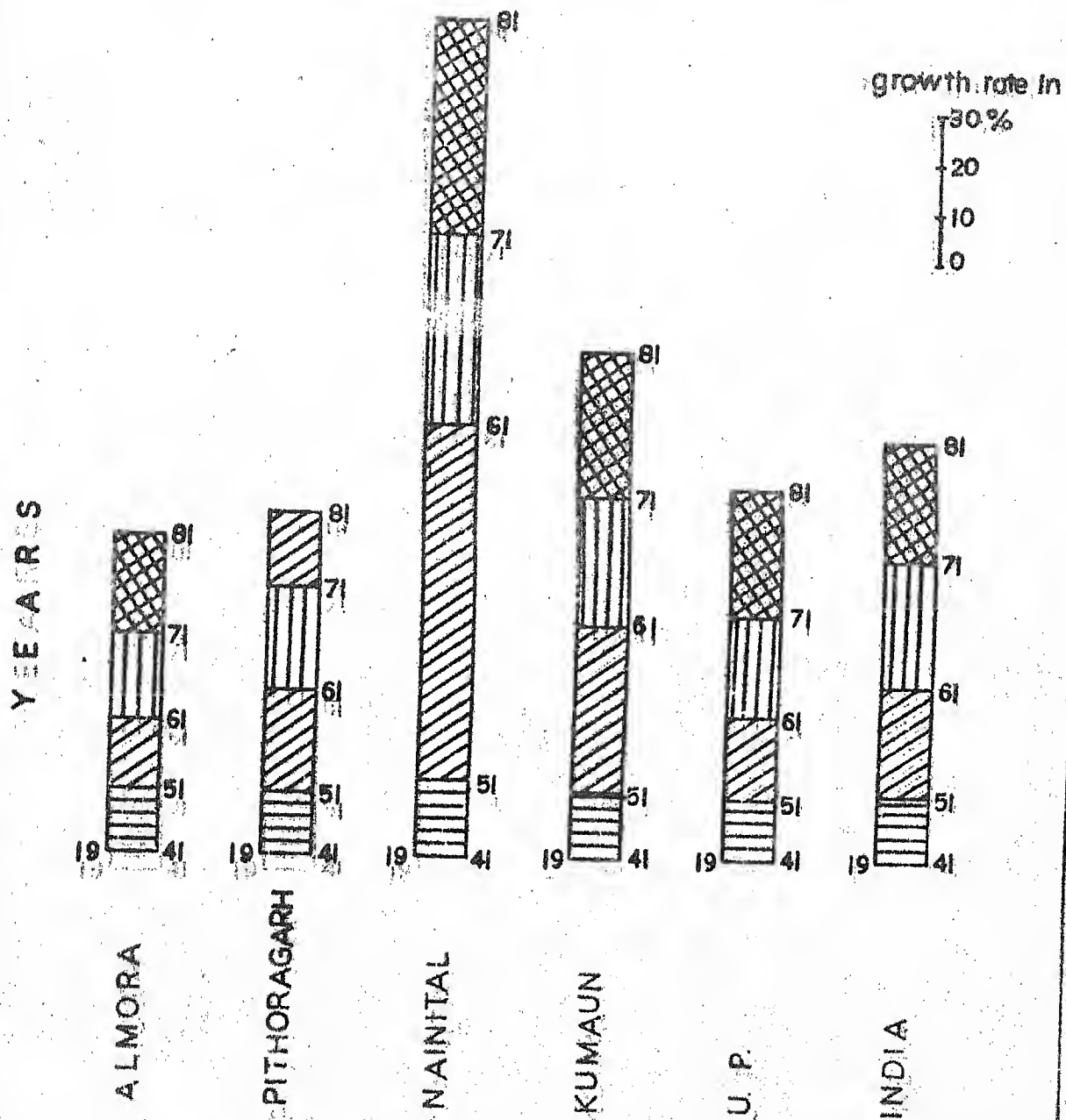
decades. There has been a sustained rising trend in population in the region and in each of the districts comprising it, over the period (Table 2.2). During the three decades the population of the region has increased by 115 per cent. The hill districts of Almora and Pithoragarh and the hill part of the Nainital district experienced a growth of 59, 67 and 89 per cent respectively while Nainital district as a whole added to its rise in the population of its plains part.

While this differential phenomenon has been experienced in each of the three decades - the most striking feature observed is an unprecedented growth of 71 per cent of Nainital district during the 1951-61 decade as against of 14 and 20 per cent in Almora and Pithoragarh respectively. It may be noted here that the hilly part of the Nainital district, i.e., Nainital tehsil had only 20 per cent rate of population growth during the decade, the overall rate for the district was high due to the very high rate of growth of the plain region (91 per cent) of the district. It may be noted that Nainital district alone constitutes about 50 per cent of the population of Kumaon division.<sup>4</sup> Nainital

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<sup>4</sup>Census of India, 1981, Uttar Pradesh, Paper 1 of 1981, Supplement, Provisional Population Totals.

# G R O W T H of POPULATION





**Table 2.2 : Growth of Population in the Three Districts of Kumaon Region from 1951 to 1981**

Districts/ Region	CENSUSES				Percentage growth from 1951 to 1981
	1951	1961	1971	1981*	
Almora	486313 (12.46)	552843 (13.68)	648622 (17.32)	772994 (19.17)	286681 (58.95)
Pithoragarh	286583 (12.46)	344143 (20.08)	415163 (20.64)	479600 (15.52)	193017 (67.35)
Nainital	335414 (14.92)	574320 (71.22)	790080 (37.57)	1133111 (43.41)	797697 (237.82)
Nainital Tehsil <sup>1</sup>	94659 N.A.	113927 (20.35)	145949 (28.11)	179155 (22.75)	84496 (89.26)
Kumaon Region	1108310 (13.18)	1471306 (32.75)	1853865 (26.00)	2385705 (28.69)	1277395 (115.26)

\* Provisional

N.B. : i) Figures in parentheses indicate per cent growth over the previous decades.

ii) N.A. stands for not available.

iii) Upto the 1971 Census, Champawat Tehsil was included in Almora district. But in the 1981 Census, it is included in Pithoragarh district. The population of Champawat Tehsil upto the 1971 Census has, therefore, been subtracted from Almora district and added in Pithoragarh district.

Sources: i) Census of India, District Census Handbooks, Almora, Pithoragarh, Nainital, 1951, 1961, 1971.

ii) Census of India, 1981, Uttar Pradesh, Paper 1 of 1981 Supplement, Provisional Population Totals.

<sup>1</sup>Nainital Tehsil comprises the hilly terrain of the district.

district has witnessed a steadily faster growth in the subsequent decades as well, 38 per cent in 1961-71 and 43 per cent in 1971-81. Population growth of Nainital district has been the highest among the districts of Uttar Pradesh during 1971-81.<sup>5</sup>

It is interesting to note that the absolute increase of population (797697) in Nainital district during the period under reference is larger than the combined population (772896) of Almora and Pithoragarh districts in 1951. The very high growth rate of population of Nainital district has pulled the average growth rate for Kumaon region higher than that of the State of Uttar Pradesh and India. And as noted earlier, the plains part of the Nainital district has been the main contributor in this process.

There are several reasons for a big spurt of population in Nainital district in general and in its plain portion in particular. The land of Nainital plain areas particularly of the tarai is very fertile and one acre of land can feed many more persons in these areas than what the land of hilly tract does. There has, therefore, been a continuous out-migration from higher ridges of Kumaon to

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<sup>5</sup> Ibid., p.58.

tarai and bhabar in search of arable land. Besides, a huge number of refugees from Sindh, Punjab, East Pakistan (now Bangladesh) and several other regions came to settle in these areas under rehabilitation programmes during the 1951-61 decade. And, retired soldiers and freedom fighters were also allotted land in these areas.<sup>6</sup> The establishment of G.B. Pant University of Agriculture and Technology, Pantnagar also opened new vistas of human settlement in the contiguous areas to a large extent. Besides big farms and forests of tarai and bhabar areas attract wage labour, so people from hill and eastern districts are tempted to migrate to these areas seasonally as well as permanently. Prior to 1951, malaria took a heavy toll of human life thus affecting both natural growth of population and in-migration adversely. Eradication of malaria and provision of extensive medical facilities, both preventive and curative, during the decade 1951-61, reduced the death rate on the one hand, and facilitated larger in-migration, on the other. The population consequently grew fast in the tehsils of the Nainital plains, viz. 137 per cent in Kichha, 73 per cent

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<sup>6</sup> Pandey, G.C. (1977), Uttarakhand Ke Artha Vyawastha (in Hindi), Consul Publishers, Nainital, p.31.

in Kashipur, 49 per cent in Haldwani whereas in the hilly tehsail of the district it grew by 20 per cent only.<sup>7</sup>

It may also be noted that inspite of its topography being similar to that of Almora and Pithoragarh, the hilly districts, even the hilly tract of Nainital district has witnessed a continuously higher growth of population than Almora and Pithoragarh (see Table 2.2). This has been so because, besides being a famous hill resort and tourist centre, the Nainital town is the administrative headquarter of the Kumaon Division and an educational centre with many schools and the seat of the regional University. Nainital town has received its share of the general expansion of administrative and developmental activities during the last few decades, in the form of a number of new offices and branches of official and private institutions. This has obviously led to a fast rise in its population.

### 2.3 Components of Population Growth

Births, deaths and migration together change the size of population of a country or region. Excess of births

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<sup>7</sup>Census of India, District Census Handbook, Nainital, 1951 and 1961.



over deaths represents the "Natural Increase" in population. The balance between in-migration and out-migration represents the other component of change in population.

### 2.3.1 Birth and Death Rates

Excess of birth rate over the death rate could be virtually the sole factor in population growth, in a large nation; where most migration would be internal and migration into and out of it would be only marginal. This is, by and large, the situation in India. As can be seen from the figures in Table 2.3, prior to 1921, both the birth rate and the death rate were high and in consequence population increased at a slow pace and even decreased during 1911-21. But after 1921 onwards, the situation has radically changed. Control over epidemic diseases, introduction of massive health programmes, improvement in drinking water facilities, use of antibiotics, development of a more effective food distribution system and avoidance of famine catastrophes have led to a significant decline in the death rate.<sup>8</sup> Birth rate, however, continued to be high, consequently the gap between the birth rate and the death rate started to widen

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<sup>8</sup> Padmanabha, P., 'Mortality in India : A Note on Trends and Implications', Economic and Political Weekly, Vol. XVII, No. 32, August 7, 1982, p. 1285.

Table 2.3 : Birth Rates and Death Rates in India and Uttar Pradesh from 1901 to 1971

(Per 1,000)

	INDIA			UTTAR PRADESH		
	Birth rate	Death rate	Difference	Birth rate	Death rate	Difference
1901-11	49.2	42.6	6.6	N.A.	N.A.	
1911-21	48.1	47.2	0.9	N.A.	40.1	
1921-31	46.4	36.3	10.1	42.2	25.6	16.9
1931-41	45.2	31.2	14.0	47.0	21.9	25.1
1941-51	39.9	27.4	12.5	38.6	27.2	11.4
1951-61	41.7	22.8	18.9	41.5	24.9	16.6
1961-71	41.2	19.2	22.0	42.5	24.2	18.3

N.A. = Not Available

Sources : i) Davis, Kingsley : Population of India and Pakistan, Princeton University Press, 1951, p.85.

ii) Registrar General of India, Vital Statistics in India, 1961.

iii) For 1961-71, Computed by Reverse Survival Method from 1971 Census Figures.

Note : For the 1971-81 decade, the birth rate and the death rate account for 36.0 and 14.8 respectively.

and continued unabated. As a result, population growth also strided at a faster rate. Birth rate has also registered a decline particularly after 1951, but this has been more than off-set by sharp decline in the death rate. India experienced a decline in the death rate from 1911 to 1971 was about 54.9 per cent, decidedly striking, but birth rate declined by only about 16.3 per cent during the same period. Thus, India has been passing through the 'second stage of demographic transition', i.e., rising birth rate, falling death rate and thus an increasing growth rate of population. During 1971-81, the birth and death rates have further declined to 36 to 15 per cent respectively. It is expected that the death rate would still continue to decline and could be around 10 per thousand by the turn of the present century.<sup>9</sup>

In a sub-national region like the State or a sub-region like Kumaon, migration could be an important component of population growth, besides of course the birth and death rates. Yet an excess of birth over death rates seems the major contributor to population growth even in a sub-region like Kumaon. District-wise vital statistics

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<sup>9</sup> Agarwala, S.N. (1973), 'India's Population Problems', Tata, McGraw Hill Publishing Company, New Delhi, p.43.

of Kumaon region are not available, in order to ascribe the components of Kumaon population growth. We have, therefore, used estimates arrived at in other relevant studies pertaining to the region for our analysis. For instance, according to I.Z. Hussain<sup>10</sup>, during 1951-61 the birth rate and the death rate in the Kumaon region were 35.87 and 12.87 respectively giving a natural increase of 23.65 per thousand. It is thus observed that both birth and death rates are lower in Kumaon than in U.P. and the country, but death rate has particularly been much lower, almost one-half, as compared to U.P. As a result the growth of population in Kumaon has been higher than in U.P. and India. Low death rate in Kumaon can be attributed to a certain extent to its better climatic conditions and low density. According to the 1981 Census, density of population (per square kilometre) in U.P. averaged to 377 whereas in the Kumaon region it varied only from 54 in Pithoragarh to 167 in Nainital. Further, it has also been established that rural areas with lower density of population, more fresh air and more space have experienced significantly lower mortality (particularly infant) rates than those in

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<sup>10</sup> Hussain, I.Z. (1967), 'Divisional Demographic Features and Projections of Uttar Pradesh (1961-81)', Demographic Research Centre, Lucknow University, Lucknow.



crowded urban areas.<sup>11</sup> Thus a high population growth in the Kumaon region could primarily be attributed to a low death rate rather than to a high birth rate, as compared to other regions.

### 2.3.2 Migration

The influence of migration on population growth varies from region to region depending on its level of development, as well from time to time occasioned by special important historical events. In the growth of population in the country as a whole migration played insignificant role before Independence, but has added two-to-three percentage points to growth in recent decades. Stream of immigrants from Pakistan and Bangladesh has been the major component of this in-migration. Volume of internal migration has of course been significantly large. For example, U.P. had been losing a significant part of its population by migration in the decades before Independence as in indicated by a much lower growth of population than the excess of birth over death rates. According to Bhattacharjee,<sup>12</sup> during 1901-61 U.P. has

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<sup>11</sup> Report on State of Health of Uttar Pradesh with Particular Reference to Certain Diseases, Lucknow, 1961, p.170.

<sup>12</sup> Bhattacharjee, P.J. & Shastri, G.N. (1976). 'Population in India ( A Study of Inter-State Variations)', Vikas Publishing House Pvt. Ltd., New Delhi, p.41.

undergone a net loss of 1.5 million persons with nearly 2.6 million emigrants and nearly 1.1 million immigrants. After 1961 the situation seems to have reversed, as during 1961-71, population growth in U.P. was 20 per cent, while excess of birth over death rate was only 18.3 per cent. Kumaon is proverbially known as a region with high out-migration. Yet this proportion is true only of the hill districts and not for the entire region including Nainital. In fact, despite 13 and 11 per cent out-migration in Almora and Pithoragarh in 1971, the net situation for the entire region was that of in-migration to the extent of 1 per cent of population, due to a 24 per cent immigration in Nainital district. Almora and Pithoragarh districts have been continuously losing population, through migration thus reducing the rate of population growth while Nainital has been gaining population, particularly in the post-Independence period, thus accelerating its growth of population much beyond what the difference between birth and death rate would yield. Thus, population growth in Almora and Pithoragarh has been due to the natural growth of population, mainly popped up by low death rate, whereas in the case of Nainital district, in-migration has been the principal factor of population increase.

## 2.4 Some Salient Demographic Features of the Kumaon Population

Here, we shall discuss some salient ascribed and achieved characteristics of the population of the Kumaon Region. These are namely density, age, sex, rural-urban distribution and literacy of the population.

### 2.4.1 Age Composition

Age structure of population of Kumaon is characteristically bottom heavy and 'pyramidical' tapering off at the top (Table 2.4). The wide base of the 'pyramid' consists of a large number in the age-group below 15 which increased from 38 per cent in 1951 to 42 per cent in 1971. A relatively high birth rate combined with a low and declining infant mortality,<sup>13</sup> account for this phenomenon; infant mortality rate was 183 per thousand in 1951; it dropped to 140 per thousand in 1971.<sup>14</sup>

The proportion of population in the working age-group 15-59 has witnessed a decline from 56 per cent in 1951 to 52 per cent in 1971. All the three districts tend to

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<sup>13</sup>Cf. Coale, A.C., 'The Effects of Changes in Mortality and Fertility on Age Composition' in the Milbank Memorial Fund Quarterly, January 1959.

<sup>14</sup>Cf. Agarwal, A.N. (Revised 1981), 'Indian Economy : Problems of Development and Planning', Vikas Publishing House Pvt. Ltd., New Delhi, op. cit., p.112.

**Table 2.4 : Percentage Distribution of Population by Age and Sex in the Three Districts of the Kumaon Region from 1951 to 1971**

Age-Groups	1951			1961			1971		
	P	M	F	P	M	F	P	M	F
Almora									
0-14	39.19	52.32	47.68	40.91	51.01	48.99	42.19	50.77	49.23
15-34	31.49	43.29	56.71	30.53	42.73	57.27	28.84	43.83	56.17
35-59	23.16	52.08	47.92	22.12	48.37	51.63	21.85	47.10	52.90
60+	6.17	54.68	45.32	6.44	53.59	46.41	7.12	53.43	46.57
All Ages	100.00			100.00			100.00		
Pithoragarh									
0-14	40.43	52.32	47.68	41.63	50.70	49.30	42.01	51.10	48.90
15-34	31.12	44.54	55.46	31.14	44.42	55.58	30.28	45.93	54.07
35-59	22.32	53.59	46.41	20.79	49.03	50.97	20.91	48.33	51.67
60+	6.13	50.42	40.58	6.44	55.01	44.99	6.80	54.39	45.61
All Ages	100.00			100.00			100.00		
Nainital									
0-14	35.11	53.11	46.89	38.39	52.67	47.33	42.04	52.85	47.15
15-34	37.61	59.90	40.10	36.34	60.94	39.06	31.87	56.11	43.89
35-59	23.33	63.15	36.85	20.76	63.30	36.70	20.85	59.28	40.72
60+	3.95	56.01	43.99	4.51	59.14	40.86	5.24	60.39	39.61
All Ages	100.00			100.00			100.00		
Kumaon Region									
0-14	38.31	52.53	47.47	40.05	50.05	49.95	42.09	51.71	48.29
15-34	33.18	49.07	50.93	32.91	50.88	49.12	30.37	49.68	50.32
35-59	23.00	55.91	44.09	21.35	54.15	45.85	21.27	45.18	54.82
60+	5.51	56.23	43.77	5.69	55.60	44.40	6.27	56.09	43.01
All Ages	100.00			100.00			100.00		

Note : i) P refers to Persons, M males and F females.

ii) Figures of Columns M and F denote percentage to P.

iii) Age-distribution data regarding the 1981 Census were not available at the time of writing.

iv) Population being 'Age not stated' has been included in the age groups 60 and above.

Source : Computed from District Census Handbooks, Almora, Pithoragarh and Nainital, 1951, 1961 and 1971.



conform to this trend. This relative decline is a result of the increase in the proportions of population in the age-groups below 15 and 60 and above. A further break-up of the age-group 15-59 reveals that in the age-group 15-34, females out-number males in the region as a whole except Nainital where the latter outstrip the former. This is because of the male-selective out-migration from Almora and Pithoragarh and in-migration in to Nainital as we have already mentioned. In contrast, in the case of age-group 35-59, the proportion of males was higher than that of the females in 1951 which has reversed in 1971. The possible explanations of this change could be, first, in the improved medical and health facilities reducing frequencies of female deaths during their reproductive age,<sup>15</sup> and second, in the increasing trend of continuation of male workers as migrants beyond the age of 35-40. At the same time, though Nainital presents an opposite case of males surpassing females, yet increase in the proportion of females in this age-group tends to support the above contention.

Lastly, the proportion of population in the age-group 60 and above accounted for 5.51 per cent in 1951 and 6.27

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<sup>15</sup> Cf. Jain, S.P. (1978), 'Indian Population Growth', The Macmillan Company of India Limited, Delhi, p.28.

per cent in 1971. The slight increase of share of population in this age group reflects some improvement in life expectancy over the period. Males exceed females, in general, in this age group in all the three districts of the region. But, while in Almora and Pithoragarh a continuous increase is noticed in the share of female population during the period, in Nainital males have been gaining share in the age group 60 years and above. The overall situation in the region is, however, in contrast with the general proposition, that females survive more than males after crossing their reproductive age.<sup>16</sup> Perhaps, out-migration of the male working population, to a large extent, explains the case of the Kumaon region. Owing to the male out-migration more especially in the hilly terrain of the region, agriculture remains largely women's occupation.<sup>17</sup> Consequently, the exorbitant load of agricultural work and household activities coupled with other factors like malnutrition and dearth of health facilities adversely affect their health resulting in a high mortality among the females in the later age-groups.

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<sup>16</sup> Bhattacharjee, P.J. & Shastri, G.N. (1976), 'Population in India (A Study of Inter-State Variations)', Vikas Publishing House Pvt. Ltd., New Delhi, p.54.

<sup>17</sup> Tewari, G.C. (1982), 'An Economic Profile of the Hill Region of Uttar Pradesh', Occasional Paper No.10, Govind Ballabh Social Science Institute, Allahabad, p.21.

### 2.4.2 Dependency Ratio

A preponderance of children, housewives and the aged, in the population reflects a high dependency ratio. Dependency ratios defined as number of dependents per 100 males in the working age-group 15-59 years are given in Table 2.5. It is seen that dependency ratio in the Kumaon has conspicuously gone up from 243 in 1951 to 281 in 1971, and has out-stripped U.P.'s dependency ratio 269 in 1971. Within Kumaon itself, the dependency ratio has varied widely among districts. In 1971, it ranged between 336 in Almora and 189 in Nainital. Dependency ratio has been

Table 2.5 : Dependency Ratio\* in the Kumaon Region and U.P. (1951-71)

	CENSUSES		
	1951	1961	1971
Almora	288	321	336
Pithoragarh	287	316	316
Nainital	168	183	189
Kumaon Region	243	253	281
Uttar Pradesh	-	260	269

Source : i) Computed from District Census Handbook, Almora, Pithoragarh, Nainital 1951, 1961, 1971.

ii) Computed from Census of India, 1961, 1971, Uttar Pradesh.

\* Defined as (Population - Male workers)/Male workers X 100.

the highest in Almora and lowest in Nainital throughout the period under reference. Here again, male selective migration from Almora and Pithoragarh and in to Nainital, explains the variations in the proportions of their working population, and consequently in dependency ratios among the districts in the region. Since agriculture the main occupation in the Kumaon region, is carried out largely by the female population, particularly in Almora and Pithoragarh, an appropriate measure of dependency should legitimately take account of the female working population also. We have, therefore, worked out dependency ratio, as number of dependents per worker (male and female) in Table 2.6.

Table 2.6 : Dependency Ratio\* in Kumaon Region and U.P. (1951-71)

	CENSUSES		
	1951	1961	1971
Almora	83	90	97
Pithoragarh	87	93	95
Nainital	64	75	90
Kumaon Region	78	84	94
Uttar Pradesh	139	88	95

Source : Ibid.

\* Defined as (Population - Male + Female Workers)/(Male + Female Workers) X 100.



Interestingly, on this basis the dependency ratio in the region is found to be quite low. Although the dependency ratio is less than 1, yet it can be stated that it does not reflect the economic condition of population truly in view of the low levels of productivity and income per worker. A high worker-population ratio, therefore, does not guarantee a reasonably high per capita income level which could enable the population to have a reasonably good standard of living and also ensure growth through capital formation and savings.

#### 2.4.3 Sex-Composition

The male-female composition of population influences not only the form and tempo of life in any community, but also vitally affects labour supply through marriage and fecundity.<sup>18</sup> The study of male-female ratio or sex-composition is, therefore, of special importance to which we turn our attention now. Table 2.7 indicates the sex-ratio, defined, as usual, as number of females per thousand males, in India, Uttar Pradesh and the Kumaon region.

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<sup>18</sup> Sinha, V.C. (1979), 'Dynamics of India's Population Growth', National Publishing House, New Delhi, p.139.

Table 2.7 : Sex-Ratio in India, Uttar Pradesh and Kumaon Region from 1951-to 1981

	CENSUSES			
	1951	1961	1971	1981*
Almora	1044	1091	1088	1099
Pithoragarh	1020	1044	1026	1055
Nainital	716	719	798	844
Kumaon Region	927	918	941	962
Uttar Pradesh	910	909	879	886
India	946	941	930	935

\* Provisional

Sources : i) Census of India, District Census Handbooks, Almora, Pithoragarh, Nainital, 1951, 1961, 1971.

ii) Census of India, 1971, General Population Tables.

iii) Census of India, 1981, Uttar Pradesh, Paper 1 of 1981, Supplement, Provisional Population Totals.

The general pattern of an adverse sex-ratio as obtained in India and U.P., also holds in the case of the Kumaon region. The excess of male over female population is, however, significantly less in the Kumaon case than elsewhere. Further, it is noticed that in India and U.P., it has tended to deteriorate over the decades, while in Kumaon region a generally opposite tendency is noticeable. For

the first time, in 1981 it is seen that the tendency for the sex-ratio to deteriorate has been halted in India and U.P. and that, in fact, there has been a slight improvement. The improvement in the sex-ratio is in line with the assumption made by the Expert Committee on Population Projections that the expectation of life at birth of females would improve over the years. Nonetheless, one of the conclusions that one could at this initial stage come to is that probably maternal and child care programmes are yielding dividends.<sup>19</sup>

A more important fact to note in regard with sex ratio in the region of our study is that in Almora and Pithoragarh females exceed males and there has been a steady increase in sex-ratio throughout the period except a marginal decrease in 1971. In contrast, in Nainital males out-number females, though the sex-ratio has witnessed conspicuous improvement there also over the period. The explanation for such differences in the sex-ratio among the districts in the region chiefly lies in male migration from the two former districts and in-migration to the latter district as noted earlier. Age specific

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<sup>19</sup> Padmanabha, P., 'The Decisive Decades : A Note on the Provisional Results of the 1981 Census of India', Yojana, Vol.XXV/9, 16-30 May 1981, op. cit., p.6.

sex-ratios in the districts well confirm the foregoing contention. As seen from the figures in Table 2.8, the sex ratio is favourable to women in the entire working age-group in Almora and Pithoragarh and significantly adverse in Nainital. In fact, the number of females per 1000 males tend to be almost the double in the former two districts as compared to Nainital. Another significant fact to note is the general improvement in the sex-ratio in the region and in each of its districts over the decades, which could probably be ascribed to rise in age at marriage and improvements in the health facilities, particularly for child birth and post-natal problems.<sup>20</sup>

Sex-ratio is usually found to be lower in the urban areas than in the rural areas, as is also evidenced by figures for India, U.P. and Kumaon given in Appendix I. This difference is ascribed mostly to the migration of males from rural to urban areas, leaving their women folk back in the villages. It is significant to note in this context that this difference is found to be significantly higher in Kumaon than in U.P. or the country as a whole, and higher in Almora and Pithoragarh than in Nainital

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<sup>20</sup> Cf. Agarwal, A.N. (Revised 1981), 'Indian Economy : Problems of Development and Planning', Vikas Publishing House, Pvt. Ltd., New Delhi, p.111.



**Table 2.8 : Age-Specific Sex-Ratios in the  
Three Districts of the Kumaon  
Region from 1951 to 1971**

	Age Groups	CENSUSES		
		1951	1961	1971
Almora	0-14	911	960	970
	15-34	1310	1341	1281
	35-59	903	1067	1123
	60 +	831	866	872
Pithoragarh	0-14	909	974	957
	15-34	1245	1251	1177
	35-59	866	1039	1069
	60 +	683	829	838
Nainital	0-14	883	897	892
	15-34	669	640	782
	35-59	583	560	687
	60 +	783	691	656
Kumaon Region	0-14	904	968	934
	15-34	1038	965	1013
	35-59	788	847	908
	60 +	778	801	783

Note : Age-distribution data regarding the 1981 Census were still awaited at the time of writing.

Sources : Census of India, District Census Handbooks, Almora, Pithoragarh, Nainital, 1951, 1961, 1971.

district of the region. This pattern of sex-ratio further corroborates the hypothesis regarding the nature of migration from hills and its impact on the population structure.

#### 2.4.4 Density of Population

As noted earlier and evidenced by figures in Table 2.9 density of population in the Kumaon region has been considerably low as compared with Uttar Pradesh and India. In the Kumaon region, it was 53 in 1951 and increased to 113 in 1981 as against 214 and 377 respectively in Uttar Pradesh and 110 and 221 respectively in India. In fact, density of population or human habitation depends upon the natural factors like climate, topography and fertility of soil on the one hand, and level of development initiated by agricultural productivity, industrialisation and availability of other facilities, on the other.<sup>21</sup> In Kumaon, while the climate to a certain extent may attract population, this attraction is more than offset by the disadvantages offered by topography resulting in low potential to economically support the population. Density, therefore, is low. It is, however,

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<sup>21</sup> Kamble, N.D. (1971), Structure and Determinants of Spatial Population Distribution (mimeographed), Sardar Patel Institute of Economics and Social Research, Ahmedabad

**Table 2.9 : Density of Population in India, Uttar Pradesh and the Three Districts of the Kumaon Division from 1951 to 1981**

	Area in Km (in the 1981 Census)	CENSUSES				% Increase during 1951- 1981
		1951	1961	1971	1981*	
Almora	5385	90	103	120	144	60.00
Pithoragarh	8856	32	39	47	54	68.75
Nainital	6794	49	85	116	167	240.82
Kumaon Region	21035	53	70	88	113	113.21
Uttar Pradesh	294413	214	250	300	377	76.16
India	3287782	110	132	178	221	89.09

\* Provisional

N.B. : Densities for the 1951, 1961 and 1971 Censuses have also been worked-out on the basis of Area in the 1981 Census.

Source: i) Census of India, 1971, General Population Tables.

ii) Census of India, District Census Handbooks, Almora, Pithoragarh, Nainital, 1951, 1961, 1971.

iii) Census of India, 1981, Uttar Pradesh, Paper 1 of 1981 Supplement, Provisional Population Totals.

interesting to note that though density of population in the Kumaon has evidently been lower than Uttar Pradesh and India, yet the overall increase has been markedly higher in the region (113 per cent) than in Uttar Pradesh (76 per cent) and India (89 per cent). Also, as in other aspects there are significant differences in the district-wise densities, it is as high as 167 in Nainital, and as low as 54 in Pithoragarh. And while the densities in Almora and Pithoragarh increased by around 60 to 70 per cent during 1951-81, that in Nainital increased by almost 250 per cent.

#### 2.4.5 Rural-Urban Distribution of Population

Urbanization is both a consequence and a cause of economic development. Share of urban areas in total population is an important index of the progress of an economy. On this basis the economy of Kumaon could easily be characterised as less developed than that of U.P. and India in so far as the level of urbanization in the Kumaon region has been lower as compared with India and Uttar Pradesh throughout the period under study (Table 2.10). An overwhelming majority (84 per cent) of population still resides in the rural areas. The situation in U.P. is only slightly better with 82 per cent of its population being rural, but significantly better in the country as a whole, with 23 per cent of its population being urban in 1981.



Table 2.10 : Rural-Urban Distribution of the Population of India, Uttar Pradesh and the Kumaon Region from 1951 to 1981

	1951		1961		1971		1981*		% Growth 1951-81	
	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban
Almora	462775 (95.15)	23538 (4.85)	525599 (95.07)	27244 (4.93)	609510 (93.97)	39112 (6.03)	726679 (94.00)	46315 (6.00)	262904 (57.03)	22777 (96.77)
Pithoragarh	286583 (100.00)	-	344143 (100.00)	-	403221 (97.12)	11942 (2.88)	452547 (94.36)	27053 (5.64)	165964 (57.91)	15111 (126.54)
Nainital	260414 (77.64)	74999 (22.36)	462142 (80.47)	112178 (19.53)	615201 (77.86)	174879 (22.14)	819205 (72.30)	313906 (27.70)	558791 (214.58)	238907 (318.55)
Nainital Tehsil	79671 (84.16)	14988 (15.84)	96390 (84.60)	17537 (15.40)	118589 (81.25)	26360 (18.75)	146062 (81.53)	33093 (18.47)	66391 (83.33)	18105 (120.80)
Kumaon Region	1009772 (91.11)	98538 (8.89)	1331884 (90.52)	139422 (9.68)	1627932 (87.81)	225933 (12.19)	1998431 (38.77)	387274 (16.23)	988659 (97.91)	288736 (293.02)
Uttar Pradesh	54590043 (86.35)	8625699 (13.65)	64266506 (87.14)	9479895 (12.86)	75952548 (85.98)	12388596 (14.02)	90912651 (81.99)	19973223 (18.01)	36322648 (66.54)	11347524 (131.55)
India	298647125 (82.71)	62440965 (17.29)	360298168 (82.03)	78936603 (17.97)	439045675 (80.09)	109113977 (19.91)	527621544 (77.16)	156188507 (22.84)	228974419 (76.67)	93747542 (150.13)

\* Provisional

Note : i) Figures in parentheses indicate percentage to total population.

ii) Upto the 1961 Census, there was not urban area in district Pithoragarh.

Sources: i) Census of India, District Census Handbooks, Almora, Pithoragarh, Nainital, 1951, 1961, 1971.

ii) Census of India, 1981, Uttar Pradesh, Paper 1 of 1981 Supplement, Provisional Population Totals.

iii) Times of India, March 18, 1981.

A increasing trend in the proportion of population in urban areas has been observed all over the country. But what is significant to note is that the rate of growth of urban population has been astoundingly higher in Kumaon than in the State and the country. As a result, the proportion of urban population increased from 9 per cent in 1951 to 16 per cent in 1981. In Kumaon, the urban population has grown in absolute terms from a figure of 98 thousand in 1951 to 387 thousand in 1981, yielding a growth of 293 per cent. The corresponding percentages for India and Uttar Pradesh are 150 per cent and 131 per cent respectively. In other words, the ratio of rural population to urban population in Kumaon has come down from 10.1:1 in 1951 to 5.2:1 in 1981.

Within Kumaon itself, the degree of urbanisation varies widely particularly between Nainital and the other two districts. In Nainital district, urban population accounted for 22 per cent in 1951 but incidentally dropped to 19 per cent in 1961. This decline was due to the definitional change of urban areas, making the concept of urban area somewhat restrictive. In the subsequent decades, it again gathered momentum and accounted for 22 per cent in 1971 and 28 per cent in 1981. On the other hand, it amounted about 5 per cent in 1951 in Almora and lazily crept to 6 per cent in 1981. Surprisingly, in the case of Pithoragarh, urban

population was merely 3 per cent in 1971 which reached quite close to Almora in 1981. The main reason for sudden rise is to be found in the reclassification of some erst-while rural areas as urban areas in 1981 Census. Besides, Nainital tehsil which comprises hilly area has also witnessed a higher proportion of urban population as compared with the two other homogenous areas, namely Almora and Pithoragarh and even Uttar Pradesh also. This is primarily on account of the prominence of Nainital town and its fast growth during this period.

The growth of urban population and increase in the extent of urbanisation in Kumaon is mainly accounted for by the trends in Nainital district. So far as the other two districts are concerned, growth of their urban population during 1951-81 has been lower than that in India and Uttar Pradesh. Whatever increase in urbanisation has taken place in Almora and Pithoragarh, it is attributed to natural increase in urban population. In the case of Nainital, it is mainly due to net in-migration into the towns of the district and the emergence of some new towns out of the

earlier rural settlements.<sup>22</sup> The latter is evidenced by the following district-wise figures of new towns in the 1981 Census.

District-wise List of New Towns, 1981

Districts	Towns	Class	Population Size
Almora	1. Dwarahat N.A.	VI	Below 5,000
Pithoragarh	1. Dharchula T.A.	VI	-do-
	2. Didihat T.A.	VI	-do-
	3. Lohaghat N.A.	VI	-do-
	4. Champawat T.A.	VI	-do-
Nainital	1. Bhimtal T.A.	VI	-do-
	2. Lalkuan T.A.	VI	-do-
	3. Kaladhungi T.A.	VI	-do-
	4. Sultanpur T.A.	VI	-do-
	5. Bazpur T.A.	IV	10,000-19,999
	6. Kichha T.A.	IV	-do-
	7. Gadarpur T.A.	V	5,000-9,999
	8. Sitarganj T.A.	V	-do-
	9. Khatima T.A.	V	-do-

Source : Census of India, 1981, Series-22, Uttar Pradesh, Paper 1 of 1981 Supplement, Provisional Population Totals, page 13.

<sup>22</sup> The definition of urban area adopted in the 1981 Census is as follows :

A. All statutory towns, i.e., all places with a municipal corporation, municipal board, or contonment broad or notified town area.

B. All other places which satisfy the following criteria:

- i. A minimum population of 5000;
- ii. 75 per cent of the male working population engaged in non-agricultural (and allied) activity; and
- iii. A density of population of atleast 400 per sq.km. (or 1000 per sq. miles).



A rapid upsurge in the urban population during the 1971-81 decade in Nainital district was mainly due to the inclusion of 9 new areas in the list of urban areas. Of course, the population of old towns particularly Nainital has also grown fast due to reasons stated earlier. On the other hand, only a few areas have been defined as new urban areas, and old towns have also grown slower in Almora and Pithoragarh. Levels and pace of economic development of the three districts, when correlated with the extent and growth of urbanisation goes well to corroborate the proposition of a strong association between urbanisation and economic development.<sup>23</sup>

#### 2.4.6 Literacy

Education not only improves the quality of human life but also positively influences economic and social development. It is, therefore, regarded as a key input in development. Available evidences also suggests that most of the countries with higher average income have a high percentage of literacy and higher level of skill. On this

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<sup>23</sup> Joshi, B.K. (1982), 'Under-Development in Hill Areas of Uttar Pradesh : A Socio-Economic Study', (Mimeographed Report), Giri Institute of Development Studies, B-42, Niralanagar, Lucknow, p.11.

criterion, Kumaon scores better than U.P. and the country, as is evidenced by the figures in Table 2.11.

The region stands on top in overall literacy and male literacy; but in the case of female literacy it lags behind India and outstrips U.P. As regards, increase in literacy during the period 1951-81, female literacy has witnessed a markedly higher increase as compared to male literacy. It may also be noted that while U.P. has experienced the highest increase in overall literacy as well as in the male literacy, followed by India, Kumaon region has registered the highest increase of the order of 400 per cent in female literacy as against of 305 per cent in U.P. and 214 per cent in India.

In Kumaon region as a whole, the percentage of literates to the total population was 18 in 1951 and 38 in 1981, i.e., an increase of more than two-fold. At the same time, it is important to note that while there is decidedly general improvement in the literacy in the region, the fact remains that even in 1981, nearly half of the males and nearly three-fourth of the females in the region were still illiterate. According to an observer, the most shocking revelation of an analysis of the first results of the 1981 Census data, was not the high growth rate, but the high illiteracy rate,

**Table 2.11 : Literacy Rates by Sex in India, Uttar Pradesh and Kumaon Division From 1951 to 1981**

	P=Person M=Male F=Female	CENSUSES				% Increase 1951- 1981
		1951	1961	1971	1981*	
Almora	P	16.8	21.4	28.8	38.9	131.0
	M	30.3	38.5	46.3	58.4	80.4
	F	3.6	5.6	12.7	21.1	490.5
Pithoragarh	P	15.8	23.5	30.3	37.9	140.5
	M	29.4	41.7	48.2	56.4	92.0
	F	1.9	5.8	12.9	20.4	979.9
Nainital	P	21.7	27.4	31.9	37.5	72.3
	M	30.3	36.7	41.3	46.9	54.7
	F	9.4	14.4	20.2	26.3	177.9
Kumaon Region	P	18.0	24.6	30.4	38.0	111.1
	M	30.2	38.8	44.4	52.2	73.1
	F	4.6	9.3	15.4	23.3	400.2
Uttar Pradesh	P	10.8	17.7	21.7	27.4	153.7
	M	17.4	27.3	31.5	38.9	123.8
	F	3.6	7.0	10.5	14.4	305.1
India	P	16.7**	24.0	29.4	36.2***	116.8
	M	24.9**	34.4	39.4	46.7***	87.3
	F	7.9**	12.9	18.7	24.9***	213.7

N.B. : \*Provisional Figures.

\*\*Excludes Jammu and Kashmir.

\*\*\*Excludes Assam and Jammu & Kashmir.

Sources : i) District Census Handbooks, Almora, Pithoragarh, Nainital, 1951, 1961, 1971.

ii) Census of India, 1971, General Population Tables.

iii) Census of India, 1981, Uttar Pradesh, Paper 1 of 1981 Supplement, Provisional Population Totals.

iv) Census of India, 1981, Series-1, India, Paper-3 of 1981, Provisional Population Totals (workers and non-workers).

especially of the female population.<sup>24</sup>

In respect of overall literacy, till 1971 Nainital was on top and but in 1981 Almora overtook it. If we look into the male-female literacy rates, Almora has the highest male literacy in 1951 and 1981 while in 1961 and 1971 it was the highest in Pithoragarh. Nainital is the district with the highest female literacy and the lowest male literacy throughout the period. Further, the total increase in literacy presents a rather interesting picture. It is encouraging that Pithoragarh has witnessed the highest increase in both male and female literacy followed by Almora. The lowest increase in both male and female literacy is, however, noticed in Nainital district. It is quite clear from the figures in table that female literacy is picking up faster than the male literacy which in turn is bound to have a salutary effect on the further pace of literacy.

Almora has been the oldest town in the region and is an education centre and administrative headquarter. This

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<sup>24</sup>K.C. Seal reported in Financial Express, Tuesday, August 18, 1981.



to a large extent, explains the high literacy, more especially male literacy, in the district. Pithoragarh district was newly formed in 1960 from the old Pithoragarh tehsil and two pattis viz., Walla Athigaon and Palla Athigaon comprising 164 villages of Almora tehsil transferred from Almora district.<sup>25</sup> It was declared as a border district, and, therefore, liberal financial assistance flowed to this district from the State Government. This led, on the one hand, to an expansion of educational facilities in the area and to in-migration of literate and educated to man the programmes and government offices, on the other. As a result, literacy rates gained momentum in the subsequent decade 1961-71 also. In the case of Nainital district particularly male in-migrants form a sizeable part of total population, and most of them belong to the labouring classes, who are mostly illiterate. It may also be noted that Pithoragarh had initially a low and Nainital a high literacy base, and rates of growth to a certain extent reflect this difference as well.

Literacy and education are pursued in the hill districts, as in most other places, viz., Almora and Pithoragarh with the sole end to better one's chances in the labour market.

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<sup>25</sup> District Census Handbook, Pithoragarh, 1961, p.vii.

Traditionally the avenues of educated or white collar employment have existed mainly outside these districts. Education, thus, has only helped the process of out-migration of the male work force. Consequently, the lack of diversification of the economies of the districts and over concentration of female population in agriculture are the two basic reasons for the low female literacy in these two districts.<sup>26</sup> Here, it may also be noted that in these districts social and traditional beliefs have also, to some extent, stunted the growth of female literacy. On the contrary, these constraints operate to a lesser extent in Nainital district especially in its plain portion and as a result female literacy is higher.

**Table 2.12 : Rural-Urban Literacy Rates in the Three Districts of the Kumaon Division (1951-81)**

	1. Rural 2. Urban	CENSUSES				% In-crease (1951-81)
		1951	1961	1971	1981*	
Almora	1	22.26	22.20	25.97	36.92	63.92
	2	63.15	61.23	67.57	76.70	21.46
Pithoragarh	1	15.84	17.88	29.42	36.08	127.78
	2	-	-	60.32	69.14	14.62 (1971-81)
Nainital	1	17.24	23.38	27.44	32.64	89.33
	2	37.73	43.80	47.77	50.14	32.89
Kumaon Region	1	19.29	21.49	27.38	34.82	80.51
	2	44.05	47.20	51.86	54.64	24.04

\*Provisional

Sources : i) District Census Handbooks, Almora, Pithoragarh, Nainital, 1951, 1961, 1971.

ii) Census of India, 1981, Uttar Pradesh, Paper 1 of 1981 Supplement, Provisional Population Totals.

<sup>26</sup> Tewari, G.C. (1982), 'An Economic Profile of the Hill Region of U.P.', G.B. Pant SSI, Allahabad, pp.22-23.

Literacy is, expectedly, very much higher in urban areas than in the rural areas. For instance, in the Kumaon as a whole, the rural and the urban literacy rates were 19 per cent and 44 per cent respectively in 1951 and 35 per cent and 55 per cent respectively in 1981. Though the same feature is noticed in all the three districts, yet it is important to note that in respect of urban literacy Almora stands on top and Nainital at the bottom throughout the period 1951-81. This difference probably reflects the differences in the composition of population of towns in the two districts. Most Almora towns are administrative and educational centres, while a large number of towns in Nainital plains are commercial and have a sizeable proportion of labour classes among their population. It is also apparent that rural literacy has picked up faster than urban literacy in all the three districts. As a result, the increase in rural and urban literacy in the Kumaon region amounted to 81 per cent and 24 per cent respectively. Among districts, Pithoragarh has witnessed the highest increase in rural literacy (128 per cent) while Nainital in urban literacy (33 per cent). About 15 per cent increase in the urban literacy of Pithoragarh only during the 1971-81 decade may be considered significant.

As seen from the figures in table 2.13, the highest increase in both number of schools as well as number of students per lakh of population in Pithoragarh district cogently is in line with our observation that the rate of progress in literacy has been faster in Pithoragarh as compared to Almora and Nainital. The figures also suggest that in terms of the conditions for expansion for literacy and education, the Kumaon region, is better placed than the State Uttar Pradesh..

#### 2.5 Growth of Labour Force in the Kumaon Region

Labour force is a dependent variable of population and so any change in the population size is bound to affect the size of labour force. In the absence of any major changes in participation rates, change in the labour force becomes almost 'since qua non' with the growth of population.<sup>27</sup> Before discussing the trends of labour force in the Kumaon region, an explanation regarding the method employed to arrive at comparable estimates from Census to Census is necessary.

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<sup>27</sup> Manpower Situation in Uttar Pradesh during the Fifth Plan Period, (A Study into Labour Force, Working Force and Unemployment), State Planning Institute, Planning Department, of Uttar Pradesh, p.1.



**Table 2.13 : Number of Junior Basic, Senior Basic and Higher Secondary Schools and Number of Students per Lakh Population in the Kumaon Division and Uttar Pradesh**

		Number of Schools			Number of Students		
		1960-61	1977-78	% Increase	1960-61	1977-78	% Increase
1. Junior							
2. Senior							
3. Higher Sec.							
Almora	1	102.37	119.17	16.41	7930.49	10132.62	27.77
	2	11.22	18.10	61.32	1326.22	1250.00	(-) 5.75
	3	4.11	12.50	204.14	677.73	3924.40	479.05
Pithoragarh	1	117.42	244.35	108.10	8482.95	15531.92	83.09
	2	15.53	33.90	118.29	1559.09	2452.54	57.51
	3	3.79	18.93	399.47	485.23	5892.09	1114.29
Nainital	1	99.65	92.42	(-) 7.25	8439.20	8379.06	(-) 0.71
	2	11.32	17.68	56.18	1434.49	1351.63	(-) 5.78
	3	3.14	8.94	184.71	711.32	4441.26	524.37
Uttar Pradesh	1	54.37	69.24	27.35	5526.80	12123.77	119.36
	2	5.96	11.43	91.78	1116.35	1640.45	46.95
	3	2.42	4.67	92.97	681.63	2701.27	296.30

N.B. : (-) Indicates percentage decrease over the period.

Source : 'Uttar Pradesh Ke Arthik Esthite Hetu Vikas Sanketak', 1979, (in Hindi), State Planning Institute, Economic and Statistics Division, pp.83-98.

Definitional changes from Census to Census has led to a problem of comparison of data regarding workers. For instance, until and including the 1951 Census, the total population was, on the basis of income, classified into the three categories, namely - earners (self-supporting), earning dependents and non-earning dependents. But in the 1961 Census for the first time, the 'income' concept was given up and the 'work' concept was adopted, and, as a result, the entire population was categorised as workers and non-workers. Consequently, the problem of comparability of data regarding workers between 1951 and 1961 Census emerged. In this regard, B.R. Kalra<sup>28</sup> has suggested a method for estimating workers for the earlier Censuses comparable to that of the 1961 Census. According to his method, 1951 and 1961 figures of workers would be comparable if from the total figures of self-supporting Persons and Earning Dependents, the following categories are deducted according to their own means of livelihood :

1. All self-supporting persons of livelihood class IV\* who did not report secondary means of livelihood other than class IV;

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<sup>28</sup> Kalra, B.R., 'A Note on Working Force Estimates, 1901-61', Census of India, 1961, Paper No.1, pp.389-94.

\* Livelihood Class IV : Non-cultivating owners of land, agricultural rent receivers and their dependents.

- ii. All earning dependents (as per their own means of livelihood) who are reported under class IV;
- iii. All self-supporting persons in non-agricultural, non-productive occupations; and
- iv. An estimated number of earning dependents in non-agricultural, non-productive occupations.

There are, however, some problems likely to arise in employing this method. For instance, the number of self-supporting persons of non-productive occupations is given in Note of Table B-III only by sex and residence. Thus, it becomes a problem how to distribute them in different livelihood classes. In the case of such earning dependents, Kalra suggests to subtract an estimated number from total earning dependents. Therefore, while there is a basic problem for such estimation, on the one hand, it will be arbitrary on the other. Such self-supporting persons are however, not large in number; for example, in Almora (including Pithoragarh) they accounted for 1630 (males 1102 and females 528) in 1951. Similarly, it is also presumed that the number of such earning dependents in non-productive occupations would be, by and large, almost close to that of such self-supporting persons. Keeping in view the above sets of issues, if their number is excluded from the calculation of workers, it is not likely to distort the

analysis. This is why we have excluded them from our calculation and thus worked-out 'workers' for the 1951 Census by the following method which, in the absence of other alternatives, could be considered the least objectionable.

Thus, 'workers' for the 1951 Census will be :

i. Total self-supporting persons

Less : Those reporting class IV as the only means of livelihood

ii. Total earning dependents

Less : Those reporting class IV as the only means of livelihood

The total labour force, so estimated for Kumaon and its districts for the years 1951, 1961, 1971, 1981 is given in Table 2.14.

A juxtaposition of the figures of population and labour force from 1951 to 1981 (Table 2.14) clearly depicts that the Kumaon region has experienced a higher increase in both the population and the labour force than the State at each point of time except growth in labour force in the 1971 Census. The decline in the labour force in the 1971 Census over the 1961 Census, is mainly due to the change in the definition of 'worker' in the 1971 Census. It is well known



Table 2.14 : Population and Labour Force in the Kumaon Region and Uttar Pradesh 1951-81

	1951			1961			1971			1981			Increase
	Population Workers			Population Workers			Population Workers			Population Workers			
P	1	2	3	4	5	6	7	8	9	10	11		
M	P	486313	287407	552843 (+13.68)	375894 (+30.79)	648622 (+17.32)	291343 (-22.49)	772994 (+19.17)	369646 (+26.88)	286681 (+58.95)	82239 (+28.61)		
F	M	297797	156666	264343 (-11.23)	169224 (+ 8.02)	310576 (+17.49)	175277 (+ 3.58)	368234 (+18.56)	181877 (+ 3.76)	70437 (+23.65)	25211 (+16.09)		
	F	248516	130741	288500 (+16.09)	206670 (+58.07)	338046 (+17.17)	116066 (-43.84)	404760 (+19.73)	187769 (+61.78)	156244 (+62.87)	57028 (+43.62)		
	P	286583	143704	344143 (+20.08)	157777 (+ 9.79)	415163 (+20.64)	125942 (-20.17)	479600 (+15.52)	277823 (+120.59)	193017 (+67.35)	134119 (+93.33)		
	M	141874	71141	168408 (+18.70)	71646 (+ 0.71)	204913 (+21.67)	74969 (+ 4.64)	233405 (+13.90)	133189 (+77.66)	91531 (+64.51)	62048 (+87.22)		
	F	144709	72563	175735 (+21.44)	86131 (+18.70)	210250 (+19.64)	50973 (-40.82)	246195 (+17.10)	144634 (+183.75)	101485 (+70.13)	72071 (+99.32)		
	P	335414	168703	574320 (+71.22)	277770 (+64.65)	790080 (+37.57)	264924 (- 4.62)	1133111 (+43.41)	399976 (+50.98)	797697 (+237.82)	231273 (+137.09)		
	M	195487	126905	334197 (+70.96)	213110 (+67.93)	439506 (+31.51)	237854 (+11.61)	614608 (+39.84)	326191 (+37.14)	419121 (+214.40)	199286 (+157.03)		
	F	139927	41798	240123 (+71.61)	64660 (+55.89)	350574 (+46.00)	27070 (-58.13)	518503 (+47.90)	73785 (+172.57)	378576 (+270.55)	31987 (+76.53)		

Contd.../-

	1	2	3	4	5	6	7	8	9	10	11
Kumaon	P	1108310	599814	1471306 (+32.75)	811441 (+35.28)	1853865 (+26.60)	682209 (-15.93)	2385705 (+28.69)	1047445 (+53.54)	1277395 (+115.26)	447631 (+74.63)
	M	575158	331000	766948 (+33.34)	453980 (+36.74)	954995 (+24.52)	488100 (+7.52)	1216247 (+27.36)	641257 (+31.38)	641089 (+111.46)	309257 (+93.15)
	F	533152	267814	704358 (+32.30)	357461 (+33.47)	898870 (+27.61)	194109 (-45.70)	1169458 (+30.10)	406188 (+109.26)	636306 (+119.35)	138274 (+51.67)
Pradesh	P	63215742	26396614	73746401 (+16.66)	28850141 (+9.29)	88341144 (+19.79)	27334460 (-5.25)	110885874 (+25.52)	35268138 (+29.02)	47670132 (+75.48)	8871524 (+33.99)
	M	33098866	19279496	38634201 (+16.72)	22480360 (+16.60)	47016421 (+21.70)	24862063 (+9.26)	58780640 (+25.02)	30282833 (+23.29)	25681774 (+77.59)	11003337 (+57.07)
Uttar	F	30116876	7117118	35112200 (+16.59)	6369781 (-10.50)	41324723 (+17.69)	2772397 (-56.47)	52077379 (+26.01)	4985305 (+79.82)	21960503 (+72.91)	2131813 (-29.95)

P = Person; M = Male; F = Female

N.B. : i) Figures in parentheses denote percentage increase (+) or decrease (-) over the preceding decade.

ii) As Pithoragarh was included in Almora in the 1951 Census, therefore, workers for the 1951 Census are divided between them on the basis of their population rates in this Census.

iii) Figures for the 1981 Census are 'Provisional'. Workers refer to total workers, i.e., Main + Marginal workers.

Sources : i) Census of India, District Census Handbooks, 1951, 1961, 1971.

ii) Census of India, 1981, Uttar Pradesh, Paper 1 of 1981 Supplement, Provisional Population Totals.

iii) Census of India, 1981, India, Paper 3 of 1981, Provisional Population Totals, Workers and Non-workers.

that the 1971 definition of worker was most restrictive as compared to the earlier and later Census. It included only such persons in the category of workers, whose main activity was economically productive work. Thus housewives and students also participating in economic activity for a minor part of their time got excluded from labour force. This is also the reason that we find that the reduction in the number of workers is seen in 1971 over 1961, mainly amongst women. 1981 figures of workers (main+marginal) is, however, considered comparable with 1961, and after the adjustments in the 1951 figures as explained above, it is possible to make reasonably valid analysis of growth of labour force over 1951-81, on the basis of figures for the initial and terminal years. As against 52 per cent increase in Kumaon, U.P. has experienced a decline of the order of 30 per cent in its female labour force during 1951-81. This is mainly due to a relatively higher proportion of marginal female workers in the Kumaon (36.4 per cent of main female workers) as compared to Uttar Pradesh (92 per cent). Variations in the growth in labour force and population and different behaviour of the ratio of growth between the two variables is due to the changes in participation of labour force over the period and over space, i.e., between Kumaon region than Uttar Pradesh.

Overall, there has been an increase of 75 per cent in the labour force of Kumaon during 1951-81. But the growth has widely varied among the three districts : 137 per cent in Nainital, 93 per cent in Pithoragarh and 29 per cent in Almora. In comparison, labour force in U.P. has grown by 34 per cent during the period. Another significant point to note is that the growth in labour force in Kumaon has been of the 65 per cent of the growth of population, in U.P. the corresponding percentage was only 45. Further, in one hill district, namely Pithoragarh, growth in labour force has exceeded growth of population.

#### 2.5.1 Labour Force Participation Rates in the Kumaon Region (1951-81)

Labour force participation rates have been higher in the Kumaon region as compared to Uttar Pradesh and India throughout the period 1951-81 (Table 2.15). This is primarily because of the substantially higher participation rates of the female workers as the male workers participation rates in Kumaon region has always been lower than that of U.P. and India except in the 1961 Census. Again, a close look at the district-wise figures in the Kumaon itself reveals an important characteristic feature that the female participation is considerably high in the hill districts,



Table 2.15 : Labour Force Participation Rates by Sex in India, Uttar Pradesh and Kumaon Region from 1951 to 1981

	P=Person M=Male F=Female	CENSUSES				
		1951	1961	1971	1981 (Main Workers)	(Total Workers)
Almora	P	51.45	59.19	38.84	29.22	47.82
	M	38.05	55.25	48.53	36.47	49.39
	F	55.08	62.83	29.85	22.62	46.39
Pithoragarh	P	48.56	59.86	40.14	37.66	45.73
	M	46.20	55.85	48.59	42.86	46.13
	F	50.86	63.66	31.97	32.73	45.36
Nainital	P	33.85	48.37	33.53	31.88	40.46
	M	39.04	63.77	54.12	51.83	57.23
	F	26.61	26.93	7.72	8.23	20.59
Kumaon Region	P	45.37	55.15	36.78	32.18	43.90
	M	44.37	59.19	51.07	45.46	52.72
	F	46.46	50.75	21.59	18.37	34.73
Uttar Pradesh	P	41.40	39.12	30.94	29.13	31.81
	M	58.09	58.19	52.54	49.61	51.52
	F	23.06	18.14	6.71	6.02	9.57
India	P	39.10	42.98	32.92	33.44	37.50
	M	54.09	57.10	52.50	51.23	53.20
	F	23.19	27.90	11.85	14.44	20.80

\*Provisional

Sources : i) Census of India, 1961 and 1971 Series 21, Uttar Pradesh General Economic Tables.

ii) Census of India, 1981, Uttar Pradesh Paper 1 of 1981 Supplement, Provisional Population Totals.

iii) Census of India, 1951, Uttar Pradesh, Volume II, Part II-B, Economic Tables.

iv) Census of India, 1981, Series -1, India, Paper-3 of 1981, Provisional Population Totals Workers and non-workers.

viz., Almora and Pithoragarh. In Nainital the opposite is the case. This is because of out-migration of people, especially men, necessitating higher participation of women in economic activities. Agriculture in the hill districts remains largely a women's job and the participation of men is confined only to a few selected operations. In fact, the relatively high percentage of female in the labour force of the hill districts only depicts their servitude to the hard economic life of their habitat.

In the Kumaon region as a whole, the labour force participation rates estimated to 45 per cent, 55 per cent, 37 per cent and 44 per cent in 1951, 1961, 1971 and 1981. The 1951-61 decade, however, witnessed a big increase of about 10 per cent in the labour force, part of which can be ascribed to the change in the definition of worker in the 1961 Census, and part to the real increase as a result of diversification of economic activities and change in attitudes to work particularly amongst workers.<sup>29</sup>

A significant decline in participation rate from 55 per cent in 1961 to 37 per cent in 1971 was, however, chiefly

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<sup>29</sup> Sinha, V.C. (1979), 'Dynamics of India's Population Growth', National Publishing House, New Delhi, p.159.

due to the drastic change in the definition of 'worker' in the 1971 Census. Many of the housewives or students who were treated as workers on the basis of some very marginal contribution in the 1961 Census were not included in 1971 as workers. Apparently, the females were more susceptible to the change in the definition of worker as compared to males. That is why the decline in female work participation rates was much more drastic, from about 51 per cent to about 22 per cent, though male participation rate too declined from about 59 per cent to about 51 per cent. The same feature is noticed in U.P. and India also. But the overall decline was sharper in Kumaon because of larger proportion of women being engaged in productive activity, besides being housewives and the greater susceptibility of women to definitional changes in 1971.

In 1981, a perceptible rise in labour force participation rates is indicated everywhere, but more sharply in Kumaon than in the State or the country. It has risen in the region from about 37 per cent to about 44 per cent 1971-81. In this regard, a close look at the sex specific participation rates indicates that the increase is appreciably higher in the case of female than the male participation rates. Whereas this tendency again in general, it

is more sharp in case of Kumaon particularly in Almora and Pithoragarh. Thus, the cause for a larger increase in participation rate in the region over 1971-81, is again the same as of its greater decline in 1971, namely higher female participation rates and greater susceptibility of female workers to definitional changes. As is known the 1981 Census workers' included not only 'main workers' (which almost identical to 'workers' of 1971) but also 'marginal' workers most of which were excluded from the definition of workers in 1971. These together make up to total workers as in 1961 Census. 'Marginal workers' are bound to be larger among female as compared to the male workers.

#### 2.5.2 Educational Levels of Labour Force

It is seen from figures in table 2.16 that the labour force has been more literate in the Kumaon region (50 per cent) as compared to the State (30 per cent). Again, in Kumaon region as a whole, an overwhelming proportion (69 per cent) of the labour force is either illiterate or literate without formal educational attainments; 25 per cent has education upto primary and junior high school, and 6 per cent matriculation and higher. These percentages are, of course, uneven among the districts and the percentage of



Table 2.16 : Labour Force Participation by Levels of Education, 1971

Districts	Levels of education*	Primary Sector		Secondary Sector		Tertiary Sector	
		Persons	Percentage	Persons	Percentage	Persons	Percentage
Almora	1	95176	61.72	3574	51.57	3823	14.43
	2	18152	11.77	1653	23.85	3608	13.62
	3	38803	25.16	1378	19.88	9173	34.63
	4	2061	1.35	325	4.70	9881	37.32
	5	154192	100.00	6930	100.00	26495	100.00
Pithoragarh	1	79258	54.11	2181	49.71	1747	9.34
	2	55803	38.09	1132	25.80	7462	39.91
	3	10645	7.27	904	20.61	5073	27.13
	4	779	0.53	170	3.88	4416	23.62
	5	146485	100.00	4387	100.00	18698	100.00
Nainital	1	124424	52.77	12559	52.15	19043	32.34
	2	24706	10.48	3664	15.21	8227	13.97
	3	80862	34.29	5380	22.34	15170	25.77
	4	5820	2.46	2480	10.30	16435	27.92
	5	235802	100.00	24083	100.00	58875	100.00
Kumaon	1	298858	55.71	18314	51.73	24613	23.65
	2	98661	18.39	6449	18.22	19297	18.54
	3	130310	24.29	7662	21.64	29416	28.27
	4	8660	1.61	2975	8.41	30732	29.54
	5	536479	100.00	35400	100.00	104058	100.00
U.P.	1	16662842	78.08	1265742	58.64	1395871	36.11
	2	1362618	6.38	291091	13.48	495446	12.82
	3	2851959	13.36	449264	20.81	905920	23.43
	4	462111	2.18	152477	7.07	1068667	27.64
	5	21339530	100.00	2158574	100.00	3865904	100.00

\* Levels of Education : 1. Illiterate; 2. Literate without educational level; 3. Primary and Junior High School; 4. Matriculation and above; 5. Total

Sources : Census of India, 1971, Uttar Pradesh, General Economic Tables.

educated labour force (matriculation and above) is dismally low in Pithoragarh district (3 per cent). A look at the sector-wise participation rates reveals that while the illiterate labour force preponderates in the primary sector followed by the secondary sector, the educated labour force is heavily concentrated in the tertiary sector (services). This is a general phenomenon that as we move up from population with low to higher educational levels, with the rise in the number of school years completed, their participation tends to decline in the primary (agriculture) sector and the secondary (industry) sector and increase in the tertiary (service) sector.

## 2.6 Conclusion

While the general pattern of growth of population and labour force in Kumaon is broadly the same as elsewhere in the country, three features emerge from the above analysis as distinct and peculiar characteristics of the demographic situation in the region. First, the Kumaon region has experienced a steady faster increase in the population than U.P. and India. What is significant to note in this respect is that population growth in Kumaon is not so much a result of high birth rate as elsewhere, as an exceptionally low

death rate (13 per 1000). In fact, birth rate in Kumaon is somewhat lower than the State and the country, but death rate has all along been very much lower. It may also be noted that population growth of Nainital district which has experienced the most rapid increase during 1951-81, is contributed to a very large extent by in-migration.

Second, the population of the region, particularly of its hill parts, is characterised by a much larger proportion of children and much higher sex-ratio than elsewhere. Population below 15 years of age constitutes as much as 42 per cent in the region, and females per thousand of males have always exceeded 1000 in the hill districts. These phenomena are the results of single out-migration of adult males from these districts.

Third, both as a result of the above demographic characteristic as well as the nature of economic activity in the region, participation rates of women population is singularly higher in the region than elsewhere. A very high participation rate amongst women, and predominance of women in the labour force, due to male out-migration, the overall participation rates have been relatively very high in the region.

### Chapter III

#### UNEMPLOYMENT : NATURE AND EXTENT

##### 3.1 Genesis of Unemployment

We have seen in the previous chapter that labour force in Kumaon region, like everywhere else has experienced a big upsurge in the labour force during the last few decades due to rapid growth of population. Growth of employment opportunities has lagged behind thus resulting in an increase in the magnitude of unemployment. Increasing population in the region gets first inevitably drawn towards land due to the dearth of other avenues of employment which has in turn intensified population pressure on land. Agriculture thus is a residuary occupation.<sup>1</sup> In effect, for persons born in rural areas, there hardly seems an escape from agricultural career.<sup>2</sup> Family rather than individual is the employment unit in agriculture, which has its own implications in terms of the emergence of under-employment or disguised unemployment especially. People living in the rural areas are in a state

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<sup>1</sup>Das, Nabagopal (1960), 'Unemployment and Employment Planning in India', Orient Longman, New Delhi, p.27.

<sup>2</sup>Sinha, V.C. (1979), 'Dynamics of India's Population Growth', National Publishing House, New Delhi, op. cit., p.390.



of enforced idleness for a number of months in a year due to the seasonal nature of agriculture. Admittedly agriculture may not be profitable in all cases for all, yet people still cling to land because it gives them not only harbourage but social prestige also. The joint family system prevalent in rural areas providing asylum for the idle and the unemployed, further facilitates the phenomenon of rural unemployment.<sup>3</sup> Lack of employment opportunities in the hill region has also led to out-migration to a large extent. Even then, the phenomenon of unemployment, particularly disguised unemployment persists in the region, as all the surplus labour force cannot possibly out-migrate.

The above characteristics of population and the labour force manifest in the agrarian economic base of the region, raise several conceptual and methodological questions in the analysis of employment and unemployment. In fact, they make it difficult to configure the true and real size and structure of un-employment.<sup>4</sup> None-the-less, we have tried in the

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<sup>3</sup>Vivekanand, Franklin, 'Concepts of Unemployment and Methods of Measuring Unemployment in an Under-developed Country - India' 'The Indian Journal of Labour Economics', Vol.XXIV, October, 1981, No.3, op. cit., p.146.

<sup>4</sup>Planning Commission, Government of India : 'Report of the Committee of Experts on Unemployment Estimates', 1970, p.16.

present study, to assess the extent and nature of unemployment on the basis of data from four sources; namely, the decennial Censuses, Employment Exchanges, the National Sample Surveys and our own field survey.

### 3.2 Estimates of Unemployment

#### 3.2.1 Unemployment According to Census

Although the Census has been one of the main sources providing data on unemployment, the data thrown up by the Census are beset with some inherent limitations. The Censuses are undertaken at an interval of ten years which cover a wide range of demographic, economic, social and cultural aspects. An important drawback which is generally pointed-out of the Census data is that these are undertaken during the slack period (February-March) of the year which grossly affects the size and the characteristics of the labour force. Besides, the use of short reference period in the Censuses can be appropriate only for those whose activity status remains unchanged throughout the year. Further, the concept of labour force changes from one Census to another as a result of which estimates of unemployment do not become strictly comparable. Also, the Census covers only those who are

overtly unemployed. Thus, the Census concepts have perforce to be simple and result in a measure of visible or superficial unemployment.<sup>5</sup>

Therefore, it is pointed-out that the rate of unemployment as disclosed by the Census cannot be regarded as a true and fair reflection of the conditions prevailing in the rural areas, as the rate of unemployment appears to be grossly under-estimated. Keeping in view these sets of issues, the 'Report of the Committee of Experts on Unemployment Estimates'<sup>6</sup> recommended that in order to get the possible appropriate estimates on unemployment, this task should be undertaken by other agencies especially the National Sample Survey Organisation. Because the coverage of the Census is too vast to collect detailed information, and the hastily trained Census enumerators are not so well equipped to ask the probing questions from the respondents especially for ascertaining from a person whether he is employed or not.<sup>7</sup> All this

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<sup>5</sup>Long, C., "The Concept of Unemployment", The Quarterly Journal of Economics, Vol. LVII, 1942, p.30.

<sup>6</sup>Planning Commission, Government of India, 'Report of the Committee of Experts on Unemployment Estimates', (1970), pp.22-29.

<sup>7</sup>Bose, Ashish, et.al., (ed) (1978), 'Population Statistics in India', Vikas Publishing House Pvt. Ltd., New Delhi, p.125.

suggests that the Census data should be taken with a good pinch of salt in this regard.

Nevertheless we have attempted here estimates of unemployment using Census figures, for whatever value they may have. Here, it is important to note that in the 1971 Census, no direct question was asked about unemployment. According to the sub-categories of non-workers, the last category, 'other non-workers' is likely to represent the unemployed.<sup>8</sup>

The Census figures presented in Table 3.1 suggest that though unemployment is on the increase everywhere, yet it does not appear as grave a problem as is generally believed. Incidence of unemployment, i.e., percentage of unemployed to labour force, is a very convenient yardstick for measuring the extent of unemployment. It is clear from the table that

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<sup>8</sup> According to the 1971 Census, the population is classified into workers and non-workers with further sub-categories. The workers and non-workers were broadly classified as (i) cultivators; (ii) agricultural labourers; (iii) household industry workers; (iv) other workers including factory workers, persons engaged in trade, transport, construction, professions and services, political and social work etc. Non workers are also classified into (i) household workers, (ii) students, (iii) retired persons and rentiers, dependents, beggars, residents of penal, mental and charitable institutions and (iv) other non-workers, i.e., those not coming under any of the aforesaid categories but seeking work. Thus the residuary category 'Others' of non-workers comprises the unemployed. (Census of India, 1971, Uttar Pradesh, Part II-B (IV), General Economic Tables).



**Table 3.1 : Size of Unemployment in the Kumaon Region, Uttar Pradesh, and India (1951-71)**

P=Persons M=Male F=Female		1951	1961	1971
Almora	P	507*(0.12)	588 (0.16)	2142 (0.73)
	M	499 (0.24)	547 (0.32)	1732 (0.99)
	F	8 (0.01)	41 (0.12)	410 (0.35)
Pithoragarh	P	Included in	253 (0.16)	548 (0.43)
	M	Almora	230 (0.03)	488 (0.65)
	F		23 (0.03)	60 (0.12)
Nainital	P	230 (0.14)	1076 (0.39)	3340 (1.26)
	M	213 (0.17)	1055 (0.49)	2950 (1.24)
	F	17 (0.04)	21 (0.03)	390 (1.44)
Kumaon Region	P	737 (0.12)	1917 (0.24)	6030 (0.88)
	M	712 (0.21)	1832 (0.40)	5170 (1.06)
	F	25 (0.01)	85 (0.02)	860 (0.44)
Uttar Pradesh	P	33155 (0.13)	84472 (0.29)	363547 (1.33)
	M	25983 (0.13)	81029 (0.36)	318108 (1.29)
	F	7172 (0.10)	3443 (0.05)	45439 (1.64)
India	P	Not Availa-	360420 (0.74)	3315845 (1.84)
	M	ble**	1246591 (1.01)	2859382 (1.91)
	F		113829 (0.17)	456463 (1.46)

Figures in parentheses refer to incidence of unemployment, i.e., percentage to labour force.

\*This includes that of Pithoragarh also.

Note : i) The corresponding data for the 1981 Census are still awaited at the time of writing.

ii) These figures could not however, be adjusted because tehsilwise data on unemployment are not available.

\*\*In the 1951 Census, data were collected only in the three States of Uttar Pradesh, Bihar and Bombay, Saurashtra and Kutch, under the option provided to the Superintendents of Census Operations of various States to include an additional question in the Census schedule on all India level. It is, therefore unemployment estimates are not available in 1951 (Report of the Committee of Experts on Unemployment Estimates, 1970, p.23).

Sources : i) Census of India, District Census Handbooks, Almora, Pithoragarh, Nainital, 1951, 1961, 1971.

ii) Census of India, 1951, Uttar Pradesh, Volume II, Economic Tables.

iii) Census of India, 1961, Vol.I, Part II-B (iii) General Economic Tables.

the overall extent of unemployment is apparently low in the Kumaon region as compared to U.P. and India and is still lower in Pithoragarh. In the Kumaon region as a whole, only 0.12 per cent of labour force was reported as unemployed in 1951; the percentage increased to 0.88 in 1971. The corresponding figures for U.P. <sup>are</sup> 0.13 and 1.33 per cent. Again, a break-up into male-female unemployed suggests that the extent of unemployment has been greater among males than females, but the situation had reversed in Nainital and U.P. in 1971.

It is observed that the extent of unemployment has witnessed a big upsurge during the decade 1961-71 and the increase is markedly higher in the case of females. The reason may partly lie in the change in the definition of 'worker' in the 1971 Census resulting in exaggeration in the number of female-non-workers and, in turn, the female unemployed. But even if observed increase is taken to be real, the total magnitude of unemployment arrived on the basis of Census data cannot be considered alarming. Even in 1971, unemployment as a proportion of labour force was three-fourth of one per cent in Almora, less than half a per cent in Pithoragarh, and one and a quarter per cent in Nainital district. The figure for the whole region was lower than one per cent (0.88 per cent).

It is, however, important to note that the extent of unemployment is significantly high in the urban areas. For instance, in the Kumaon region as a whole, incidence of unemployment in the urban areas was as high as 5.3 per cent of the labour force in 1971 as against only 0.40 per cent in the rural areas. This is mainly due to the fact that in the rural areas the adult members of a family generally remain engaged in their family holdings though there may not be sufficient work for all of them. And, in the Censuses all such persons have been recorded as employed. On the contrary, the urban occupations are of a different nature and do not give employment to all the members of the family.<sup>9</sup>

Another feature that is note-worthy is a high incidence of unemployment among the educated. In fact, incidence of unemployment is found to consistently increase with levels of educational attainments. Data on unemployment by educational levels are available for the region and districts of our study only for 1961; and figures (Table 3.3) indicate

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<sup>9</sup>Census of India, 1951, Volume II, Uttar Pradesh, Part I-A-Report, op. cit., p.442.

Table 3.2 : Incidence of Unemployment by Rural-Urban Distribution in the Kumaon Region, Uttar Pradesh and India, 1951, 1961 and 1971

	R=Rural U=Urban	CENSUSES		
		1951	1961	1971
Almora	R	476* (0.11)	328 (0.09)	1558 (0.56)
	U	31 (0.33)	260 (2.51)	584 (4.23)
Pithoragarh	R		253 (0.16)	171 (0.14)
	U		-	377 (10.81)
Nainital	R	48 (0.03)	383 (0.16)	700 (0.33)
	U	182 (0.67)	693 (1.83)	2640 (5.16)
Kumaon Region	R	524 (0.09)	964 (0.13)	2429 (0.40)
	U	213 (0.58)	953 (1.97)	3601 (5.25)
Uttar Pradesh	R	9620 (0.04)	37435 (0.14)	221109 (0.92)
	U	23535 (0.65)	47037 (1.60)	142438 (4.15)
India	R	Not Available	570061 (0.36)	1724454 (1.20)
	U		790359 (3.04)	1591391 (5.07)

N.B. : \*This includes that of Pithoragarh also  
Incidence denotes percentage to labour force.

Source : Ibid.



**Table 3.3 : Incidence of Unemployment by Levels of Education and Sex in the Kumaon Region, Uttar Pradesh and India, 1961**

	Levels of Education*	1961		
		Person	Male	Female
Almora	1	65 (0.02)	54 (0.05)	11 (0.01)
	2	68 (0.14)	66 (0.16)	2 (0.04)
	3	219 (0.85)	211 (0.93)	8 (0.41)
	4	236 (4.12)	216 (3.93)	20 (8.85)
Pithoragarh	1	92 (0.08)	74 (0.20)	18 (0.02)
	2	14 (0.06)	14 (0.07)	-
	3	91 (0.73)	89 (0.78)	2 (0.19)
	4	56 (2.49)	53 (2.42)	3 (5.17)
Nainital	1	285 (0.15)	282 (0.22)	3 (0.01)
	2	228 (0.44)	223 (0.46)	5 (0.14)
	3	315 (1.24)	309 (1.30)	6 (0.40)
	4	248 (2.22)	241 (2.21)	7 (2.66)
Kumaon Region	1	442 (0.07)	410 (0.15)	32 (0.01)
	2	310 (0.25)	303 (0.27)	7 (0.06)
	3	623 (1.00)	609 (1.05)	16 (0.35)
	4	540 (2.82)	510 (2.74)	30 (5.48)
Uttar Pradesh	1	24905 (0.11)	22334 (0.14)	2571 (0.04)
	2	19226 (0.45)	18871 (0.45)	355 (0.33)
	3	18735 (1.19)	18546 (1.19)	189 (0.70)
	4	21606 (3.04)	21549 (3.11)	328 (1.78)
India	1	302677 (0.22)	266452 (0.33)	36225 (0.06)
	2	326860 (1.01)	314835 (1.04)	12025 (0.59)
	3	384306 (2.79)	367996 (2.84)	16310 (2.07)
	4	346577 (6.46)	297308 (5.89)	49269 (15.41)

\*1. Illiterate

2. Literate (without educational levels)

3. Primary and Junior Basic

4. Matriculation and above

Source : Ibid.

that unemployment is only 0.07 per cent among the illiterates, it is 0.25 among literates, without schooling, 1.00 per cent among those with primary school education, but as high as 2.82 per cent among those with matriculation or higher education. This feature is universally observed in each district of the region, in the State as well in the country. A low incidence of unemployment among the illiterates and semi-literates is perhaps a reflection of their willingness to take up manual or menial work.<sup>10</sup> A close look at the district-wise figures under-scores an interesting feature that upto the middle school qualification the incidence of unemployment remains higher among males than females but thereafter the opposite happens. Higher unemployment among females as compared to males has been observed among the educated in general.<sup>11</sup> But U.P. has witnessed a greater incidence of unemployment among males than females at every levels of education. In-so-much-as the female workers are not willing to take up all kinds of jobs and the meagre

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<sup>10</sup> Report of the Committee of Experts on Unemployment Estimates, 1970, Planning Commission, Government of India, p.105.

<sup>11</sup> Sharma, G.D. and Apte, M.D., 'Graduate Unemployment in India', Economic and Political Weekly, June 19, 1976, op. cit., p.916.

employment opportunities in the non-agricultural sector - industry and services - are availed mostly by male workers, a greater degree of unemployment can be expected among the female than the male educated. This trend seems to be operating in Kumaon region as well.

Figures of age-specific extent of unemployment by sex (Table 3.4) suggest that most unemployed are fresh entrants in the labour force and the highest incidence of unemployment therefore is found among those between 15-34 years of age. This, however, is a general phenomenon in the country and is not anyway specific to the Kumaon region.

### 3.2.2 Unemployment According to the Employment Exchange Data

Another source of data on unemployment are the Employment Exchanges. At the outset, it is important to note that the figures provided by the Employment Exchanges on the number of work-seekers on the Live Register are beset with some limitations : 1) Unemployment according to the Employment Exchange data refers mainly to urban unemployment as the exchanges are located in urban areas though some

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<sup>12</sup> Report of the Committee of Experts on Unemployment Estimates, 1970, Planning Commission, Government of India, p.99.

Table 3.4 : Incidence of Unemployment by Age and Sex in the Kumaon Region, Uttar Pradesh and India in 1961 and 1971

Age Groups	1961			1971		
	Person	Male	Female	Person	Male	Female
Almora						
15-34	522 (0.30)	489 (0.67)	33 (0.03)	1269 (0.98)	1156 (1.62)	113 (0.20)
35-59	56 (0.04)	50 (0.07)	6 (0.01)	494 (0.43)	422 (0.56)	72 (0.18)
60 +	10 (0.03)	8 (0.04)	2 (0.02)	374 (1.22)	154 (0.64)	220 (3.38)
Pithoragarh						
15-34	224 (0.29)	204 (0.62)	20 (0.04)	278 (0.46)	238 (0.72)	40 (0.15)
35-59	24 (0.04)	21 (0.08)	3 (0.01)	190 (0.40)	185 (0.60)	5 (0.03)
60 +	5 (0.04)	5 (0.06)	-	80 (0.66)	65 (0.67)	15 (0.62)
Nainital						
15-34	907 (0.60)	894 (0.77)	13 (0.04)	2017 (1.57)	1780 (1.55)	237 (1.73)
35-59	150 (0.16)	142 (0.19)	8 (0.04)	1039 (1.01)	976 (1.05)	63 (0.65)
60 +	19 (0.12)	19 (0.15)	-	283 (1.31)	193 (0.95)	90 (6.43)
Kumaon Region						
15-34	1653 (0.41)	1587 (0.71)	66 (0.04)	3564 (1.12)	3174 (1.45)	390 (0.40)
35-59	230 (0.08)	213 (0.13)	17 (0.01)	1723 (0.95)	1583 (1.37)	140 (0.21)
60 +	34 (0.06)	32 (0.08)	2 (0.01)	737 (1.14)	412 (0.76)	325 (3.14)
Uttar Pradesh						
15-34	69933 (0.52)	67662 (0.64)	2271 (0.08)	249977 (2.12)	231917 (2.18)	18060 (1.48)
35-59	12397 (0.11)	11465 (0.13)	932 (0.04)	74974 (0.67)	62392 (0.61)	12582 (1.19)
60 +	2142 (0.08)	1902 (1.00)	240 (0.05)	38596 (1.35)	23799 (0.90)	14797 (6.76)
India						
15-34	1119614 (1.02)	1025494 (1.41)	94120 (1.10)	2706353 (3.26)	2368397 (3.49)	337956 (2.26)
35-59	210771 (0.10)	195467 (0.14)	15304 (0.81)	454595 (0.62)	395499 (0.65)	59096 (0.50)
60 +	30035 (0.81)	25630 (0.52)	4405 (1.33)	154896 (1.10)	95486 (0.77)	59410 (3.57)

Note : i) Figures in parentheses indicate percentage to labour force.

ii) Unemployed's age not stated' are included in the age-group 60 +.

iii) Inasmuch as unemployment by age is given in broad age-groups in the 1961 Census whereas it is in finer age-groups in the 1971 Census. Therefore, in order to make the similar age-groups for comparison, an adjustment has been made in the 30-39 age-group of the 1971 Census. Thus, fifty per cent of unemployed of this age-bracket are added in the 25-29 age-group and the remainder fifty per cent in the subsequent 40-49 age-group.

Source : Ibid.



rural unemployed also register with these exchanges, 2) Registration with the Employment Exchanges being voluntary, all the unemployed, even urban, do not get registered themselves, (3) Those who are studying, or are working but looking for better jobs also get registered themselves with the Employment Exchanges. It is, therefore, necessary to correct the figures of persons on Live Register to arrive at reliable estimates of the unemployed. Here, it may be pointed-out that one can at best attempt the estimate of urban unemployment on the basis of employment exchange figures, even after the necessary corrections, as the non-registration of rural unemployed in these exchanges is very difficult to estimate.

Attempts have been made to correct for limitations, namely rural registrants in urban areas, employed registrants, students registrants and unregistered unemployed, on the basis of information from various different sources. J. Krishnamurty, for example, used the following correction factors on the figure of persons on Live Register, to arrive at the estimates of urban unemployment in the country in December, 1968.

1. One third of the registrants were assumed to be located in rural areas, on the basis of a DGET Survey conducted in 1968.

- ii. Of the urban registrants, about half were assumed either employed or students, on the basis of the same DEGT Survey.
- iii. Only 40 per cent of the urban unemployed were assumed registered with Employment Exchange, on the basis of NSS 19th and 21st Rounds (1964-65 and 1966-67).<sup>13</sup>

Applying different correction factor on the estimates on unemployed among registrants Krishnamurthy also worked-out alternative estimates.

Following the same procedure, we estimated urban unemployment in the districts and the region of Kumaon. The results, however, gave an unrealistically high rate of urban unemployment, especially in Almora and Pithoragarh districts (Table 3.5). This, we hypothesised, was mainly for the following reasons.

1. The proportion of rural registrants is much higher than 33 per cent assumed particularly in Almora and Pithoragarh districts. In these districts, the towns are small and

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<sup>13</sup>He however, observed : "The limited comparability of these different sources leave the estimates arrived on this basis still doubtful regarding their accuracy", (Government of India, Planning Commission, 'Report of the Committee of Experts on Unemployment Estimates', 1970, pp.145-47.

Table 3.5 : Extent of Unemployment on the Basis of the Employment Exchange Data in the Kumaon Region from 1971 to 1981

Years	Almora		Pithoragarh		Nainital		Kumaon	
	Person on live register	Adjusted unemployed	Person on live register	Adjusted unemployed	Person on live register	Adjusted unemployed	Person on live register	Adjusted unemployed
1971	3602	3001 (21.72)	2316	1930 (55.06)	4380	3650 ( 7.13)	8581 (12.53)	
1972	3382	2818	3198	2665	7213	6011	11494	
1973	6907	5756	4265	3554	7929	6608	15918	
1974	5095	4246	3521	2934	5950	4959	12139	
1975	6336	5280	3936	3280	7616	6347	14907	
1976	7704	6420	5412	4510	10516	8764	19694	
1977	9133	7611	6548	5457	12541	10451	23519	
1978	10116	8430	7579	6316	13694	11412	26158	
1979	10229	8524	7165	5971	14226	11855	26350	
1980	11756	9796	7298	6082	15044	12537	28415	
1981	13375	11146 (66.63)	8037	6698 (72.27)	20255	16879 (17.07)	34723 (27.80)	

Note : Figures in parentheses indicate percentage to urban labour force.

Source : Regional Employment Exchange Office, Almora.

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have a sizeable number of villages surrounding them from where students come to towns for education and on completing education register with employment exchanges in the towns although they live in the villages. That there should be a large proportion of rural residents among registrants is also suggested by a very high figure of persons on Live Register as compared to the labour force. For example, Almora had 13375 person on Live Register as against urban labour force 19508 in 1981. In Pithoragarh the respective figures were 8037 and 9041. Even in Nainital, a figure of 20255 registrants, against its urban labour force of 91279 appears quite on the higher side.

ii. The proportion of unregistered urban unemployed is likely to be much lower than 60 per cent assumed on the basis of NSS survey, particularly in Almora and Pithoragarh. In the towns in these districts and to a large extent in Nainital town also, the virtually sole avenues for employment consists of government offices and other public institutions; and, it is obligatory for a candidate for these jobs to have himself registered with the Employment Exchange. Therefore, not many of the job seekers can afford to remain unregistered.

We attempted to verify the above hypotheses by having a sample check on the residences of registrants. On that basis we arrived at an estimate of rural registrants as 60



per cent in Pithoragarh, 55 per cent in Almora and 40 per cent in Nainital. So far as the unemployed non-registrants are concerned, it was not possible to verify the exact figure but, on the basis of informed judgement and some unstructured information gathered, we presumed that the following proportions of the urban unemployed register with the Employment Exchange, Almora 85 per cent, Pithoragarh 90 per cent and Nainital 65 per cent. On the basis of these corrections, we arrived at the following estimates of urban unemployment from 1971 to 1981 (Table 3.6). The incidence of unemployment as a percentage of labour force has, however, been computed, as earlier, only for the two Census years 1971 and 1981.

Table 3.6 : Extent of Unemployment on the Basis of the Employment Exchange Data in the Kumaon Region from 1971 to 1981

Year	Almora	Pithoragarh	Nainital	Kumaon Region
1971	953 (6.90)	514 (14.75)	2021 (3.95)	3488 (5.09)
1972	895	711	3329	4935
1973	1828	948	3659	6435
1974	1349	782	2746	4877
1975	1678	874	3515	6067
1976	2039	1203	4854	8096
1977	2417	1455	5788	9660
1978	2677	1684	6320	10681
1979	2708	1592	6566	10866
1980	3112	1622	6943	11677
1981	3541 (21.45)	1787 (19.76)	9348 (10.23)	14676 (12.56)

N.B. Figures in parentheses indicate incidence of unemployment i.e. unemployed as percentage to urban labour force, i.e. main workers.

Source : Ibid.

It is seen from table 3.6 that now the incidence of unemployment accounts for much lower as compared to earlier estimates (Table 3.5). A comparison of these estimates among districts indicates that incidence of unemployment is much high in Almora and Pithoragarh and low in Nainital. The main reason for this difference is the varying levels of urbanisation and size of labour force between the districts as noted earlier. Further, the incidence of unemployment has popped up everywhere, yet the lowest increase of 33.97 per cent in Pithoragarh as compared to the respective increases of 210.87 per cent and 158.99 per cent in Almora and Nainital during the period 1971-81 is interesting to note.

### 3.2.3 On the Basis of the National Sample Survey Data

The National Sample Survey Organization since its inception in 1950, has been a major source of mass statistical data on the economically active population in the country. The NSS commenced to collect data especially on unemployment since its 9th round (from May to November, 1955) and has continued the exercise in one form or another. The coverage of various rounds of surveys has varied from one round to another. From the 9th round onwards, the NSS classified the

population into "employed", "unemployed", and "not in the labour force" depending on the respondent's activity during the reference period. But during the late 1960's, the employment enquiries were critically appraised and a necessity was keenly felt for a re-orientation of the very approach to the problem and as well as for a proper conceptualization. This was thought necessary so that the extremely heterogeneous character of the labour force in the Indian economy would be recognized and properly reflected in the statistical data.<sup>14</sup>

Following the Expert Committee's<sup>15</sup> recommendations in this regard, the NSS in its 27th round (from October 1972

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<sup>14</sup>The National Sample Survey, 27th Round, Vol.I, New Delhi, 1972, p.1.

<sup>15</sup>"The concept of labour force is basic to the issue of unemployment. The concept as adopted in the developed countries is unsuitable for an economy like ours, the problem being that a sizeable proportion of labour input in the household enterprises is provided by the members of the family who have only a partial attachment to the labour market. They work in family enterprises as and when required without receiving any wages and thus, they become the part of the labour force in the technical sense of the term. When there is no such work they generally revert to household work. Their inclusion in the labour force is misleading, but their exclusion would be equally unrealistic". (Report of the Committee of Experts on Unemployment Estimates, 1970, Govt. of India, Planning Commission, op. cit., p.30).

to September 1973) attempted to collect data on unemployment to reflect, to the extent possible, the actual intensity of the problem. The 32nd Round (July 1977-June 1978) of the NSS is the recent one in this regard. In both the rounds, estimates on unemployment are based on 'current status' and 'usual status' basis.

The results of the 32nd round have not yet have published at the time of writing and the earlier 27th round does not provide district-wise estimates on unemployment. This is why the estimates of the entire Hill Region have been presented along with that of the State. Table 3.7 gives percentage distribution of persons by usual activity status by sex and residence in the Hill Region vis-a-vis state according to the 27th round of the NSS.

The incidence of under employment (1.66) is substantially higher than the overt unemployment (0.61) in the Hill region. The opposite is the case in the whole State of U.P. The break-up of the incidence of unemployment into male and female population as also into rural and urban areas exhibits a high degree of difference in this regard. Obviously, under-employment has a higher degree in the rural areas whereas open unemployment in the urban areas. Besides, more males than females appear under the grip of under-employment as well as overt unemployment.



**Table 3.7 : Percentage of Persons (Aged 15 and Above) by Usual Activity Status in the Hill Region and Uttar Pradesh (NSS 27th Round)**

Usual Activity Status		1. Hill			Rural			Urban			Total		
		2. U.P.			P			P			P		
					M	F		M	F		M	F	
1.1 Working as full workers on own farm and non-farm business	1	15.93	23.41	8.71	8.68	15.31	0.42	14.82	22.03	7.57			
	2	16.44	28.03	2.58	9.52	16.61	0.94	15.43	26.37	2.34			
1.2 Helper in own farm non farm business	1	29.64	12.51	46.91	3.21	4.42	1.70	25.57	11.13	40.07			
	2	11.36	11.83	10.81	3.57	4.86	1.99	10.23	10.81	9.54			
1. Sub-Total (I)	1	48.56	41.72	55.17	30.00	49.66	5.51	45.70	43.07	48.34			
	2	30.99	45.11	19.12	26.52	44.41	4.84	30.34	45.01	12.78			
<b>Adequate Employment</b>													
2.1 Working partly in own farm and own farm business and partly casual wage workers	1	7.31	12.93	1.89	0.76	1.36	0.00	6.30	10.96	1.63			
	2	5.20	8.66	1.08	2.75	4.61	0.49	4.84	8.06	0.99			
2.2 Working as casual wage workers not seeking work intermittently	1	0.55	0.91	0.21	0.94	1.70	0.00	0.61	1.04	0.17			
	2	2.54	3.09	1.87	2.81	2.93	0.45	2.43	3.07	1.67			
<b>Inadequately Employed</b>													
2.3 Casual wage workers seeking work intermittently	1	1.61	2.66	0.61	1.89	3.06	0.42	1.66	2.73	0.58			
	2	2.76	3.94	1.34	2.00	3.38	0.33	2.65	3.86	1.19			
2.4 Non-working but seeking or available for work	1	0.52	0.90	0.14	1.13	1.70	0.43	0.61	1.04	0.18			
	2	0.26	0.43	0.06	0.93	1.58	0.14	0.36	0.60	0.08			
2. Sub-Total (II)	1	9.59	17.40	2.84	4.72	7.82	0.85	9.18	15.77	2.56			
	2	16.76	16.12	4.35	7.49	12.50	1.41	10.28	15.59	3.93			
3. Labour Force : Sub-Total (I+II)	1.	58.55	59.12	58.01	34.72	57.48	6.36	54.88	58.84	50.90			
	2	41.75	61.23	18.47	34.01	56.91	6.25	40.62	60.60	16.71			
4. Not available for work, i.e., Not in the labour force	1	41.45	40.88	41.99	65.25	42.52	93.60	45.12	41.16	49.10			
	2	58.25	38.77	81.53	65.99	43.09	93.75	59.38	39.40	83.29			

Source : The National Sample Survey, Twenty Seventh Round, October 1971 - September 1973, Tables 8 (a), 8 (b) and 8 (c), pp.51-56.

Economics and Statistics Division, of the State Planning Institute, Lucknow has also undertaken a study based on the 27th round of the NSS to determine the nature and extent of unemployment in the State. Their results are presented in table 3.8, which also confirm the observations made above. A comparison with the State figures suggests that the exclusively hill districts (0.87) are very close to the State (0.88), its distribution into rural and urban areas reveals some difference between the two. While the incidence of male unemployment in both rural and urban areas is substantially higher in the hill districts, the incidence of rural female unemployment remains at a very low level in the hills (0.12) as compared to the State (0.34) as a whole. This reflects the outstanding fact that agriculture is largely a women's job in the hills while the participation of males is confined only to a few selected operations.<sup>16</sup>

#### 3.2.4 On the Basis of Sample Data

As a supplement to the study of the extent and nature of unemployment based on data from above secondary sources,

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<sup>16</sup>Tewari, G.C. (1982), 'An Economic Profile of the Hill Region of Uttar Pradesh', Occasional Paper No.10, Govind Ballabh Pant Social Science Institute, Allahabad, p.21.

**Table 3.8 : Percentage of Unemployed (Classify by Usual Status) to the Labour Force in Uttar Pradesh and Hill Districts**

	Rural			Urban			Total		
	P	M	F	P	M	F	P	M	F
Almora + Pithoragarh + Garhwal + Chamoli + Tehri Garhwal + Uttarkashi	0.81	1.72	0.12	3.13	2.70	5.97	0.87	1.77	0.16
Nainital	1.75	1.69	1.90	1.75	1.85	-	1.75	1.72	1.84
Dehradun	0.23	0.32	-	3.82	3.50	7.36	1.52	1.66	1.04
Hill Region	1.56	0.26	0.90	3.07	2.84	5.58	1.08	1.74	0.34
Uttar Pradesh	0.62	0.70	0.34	2.73	2.78	2.22	0.88	0.98	0.46

Note : P denotes persons, M males, and F females.

Source : Unemployment in Uttar Pradesh : A Study Based on the NSS 27th Round (October 1972-September 1973).

a sample study among 200 households in the rural Pithoragarh was also undertaken by us during June-July, 1982. As regards extent or incidence of unemployment, our sample data also tend to confirm the aforesaid observation that the extent of overt or open unemployment is not very large. This is evidenced by the Table 3.9.

Table 3.9 : Extent of Unemployment in the Four Sample Villages of Pithoragarh (Rural) in June-July, 1982

Number of unemployed	Number of households	Extent/incidence of Unemployment	
		% to labour force	% to the population
0	177		
1	21		
2	2		
3 and above	0		
25	200	4.46	2.37

It is seen from the figures in table above that out of 200 households, only 23 households had a total of 25 persons as unemployed in the sample villages. In terms of extent or incidence of unemployment, it accounted for 4.46 per cent to the total workers and 2.37 per cent to



the total population. It is further interesting to observe that as many as 177 households had not even a single unemployed, 21 households reported only 1 person as unemployed in each and 2 households reported 2 persons as unemployed each. On the basis of above description, now it can be summed up that overt unemployment is not a serious problem in the rural Kumaon in general and in the rural Pithoragarh in particular.

#### 3.2.5 Comparison of Different Estimates

An examination of the above alternative estimates of unemployment revealed by various sources suggests that the incidence of unemployment as disclosed by the Census and the National Sample Survey are very close to each other (Table 3.10). Incidence of rural unemployment is substantially lower than that of urban unemployment everywhere in the region. The highest incidence of urban unemployment is, however, revealed by the Employment Exchange data. On the other hand the highest incidence of rural unemployment is revealed by our sample data of Pithoragarh district. On the whole, the different estimates suggest that overall unemployment rate in Kumaon may be in the range of one to two per cent, it being around 1 per cent in the rural and around 4.5 per cent of labour force in the urban areas.

**Table 3.10 : Comparative Statement of Estimates of Unemployment Incidence**

[illegible]

N.B. : \*This comprises Almora + Pithoragarh + Garhwal + Chamoli + Tehri Garhwal + Uttarkashi.

**\*\*This refers to the 'Hill Region'.**

Unemployment seems a serious problem in the urban areas particularly in Almora and Pithoragarh. So-far-as the rural areas are concerned, under-employment/disguised unemployment rather than overt unemployment seems the real problem. We have, therefore, also made an attempt to examine the extent of under-employment in rural areas on the basis of sample survey.

### 3.3 Under-Employment or Disguised Unemployment - A Brief Theoretical Background

As stated earlier, overt unemployment touches only the fringe of unemployment problem in an agricultural economy like ours. In fact, it is meaningful in the context of wage earners. But in the case of self-employed and their dependents, overt unemployment is evidently rare.<sup>17</sup> Therefore, in an economy like ours where the majority of workers are self-employed in agriculture, the problem of unemployment should be approached from the angle of under-employment.

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<sup>17</sup> In view of the salient characteristics of the labour force pre-ponderance of self-employment and fairly large component of "unpaid family workers" in household enterprises - there is very little likelihood of much chronic open unemployment throughout the year'. (Report of the Committee of Experts on Unemployment Estimates, 1970, Planning Commission, Government of India, p.15).

Under-employment refers to persons whose employment is part-time, seasonal or of inherently low productivity.<sup>18</sup> On the other hand, the term disguised unemployment is used to designate a situation in which an amount of labour force may be withdrawn from the land without affecting its cultivation and production. This reflects the notion that the marginal productivity of these workers withdrawn from agriculture is zero.<sup>19</sup> Here, however, an attempt has been made to determine the extent of under-employment on time-criterion, using our sample data.

Agriculture, in the Kumaon region, more than elsewhere, offers only seasonal employment. Around sowing and harvesting, there is heavy load of work to be completed in short time and, therefore, agriculturists have to work long hours. As against this, the period between the harvest and the next sowing is almost workless, rendering many without work. Thus, under-employment/seasonal unemployment is inevitable to exist.

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<sup>18</sup> Pant, S.C. (1976), 'Indian Labour Problems', Chaitanya Publishing House, 5-A, University Road, Allahabad, p.255.

<sup>19</sup> Nurkse, Ranger (1953), 'Problems of Capital Formation in Under-developed Countries', Oxford University Press, op. cit., p.32.



For assessing incidence of such unemployment, we have employed the usual work-time disposition approach. The whole year has been divided into four seasons and time-disposition of workers by sex in each season is recorded accordingly and then it is converted into under-employment in each part of the year. The time period to consider a worker as fully "gainfully employed" is taken as per norms set by the Planning Commission, i.e., 280 days in a year. In this way, workers those working less than 280 days during the whole year are regarded as under-employed. This emphasises the fact that the problem is not how many persons are unemployed but how much they remain unemployed.

Incidence of under-employment or seasonal unemployment estimated on this basis turns out to be very high, 173 days for males and 91 days for females (Table 3.11). As percentage of the norm of 280 days, it works out to 62 and 32 per cent respectively. Most males remain unemployed for more than 180 days. As against this, the majority of females is workless for less than 130 days. In a study, S.L. Shah<sup>20</sup>

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<sup>20</sup> Shah, S.L. (1982), 'Micro-level Planning and Strategies for Agricultural Development in Mid-Himalayas : A Study of Kosi-Suyal Watershed in the Mid-Hills of U.P. (Village Chausli in Hawalbagh Block of Almora district)', Vivekanand Laboratory for Hill Agriculture (Indian Council of Agricultural Research), Almora, U.P., p.32.

Table 3.11 : Extent of Under-Employment in Agriculture in the Four Sample Villages of Rural Pithoragarh (July 1981 to June 1982)

Employment	Males with Employment for					Females with Employment for				
	Below 30 days	30-60 days	60-90 days	90 + days	Average	Below 30 days	30-60 days	60-90 days	90 + days	Average
June-August	59	76	64	1	34.53	5	24	166	5	63.38
September-November	58	114	28	-	29.61	5	58	137	-	54.23
December-February	133	67	-	-	10.92	111	87	2	-	16.53
March-May	55	107	38	-	31.84	6	37	157	-	55.30
Whole Year	Below 100	100-150	150-200	200-250	Average	Below 100	100-150	150-200	200-250	Average
	84	53	50	12	106.92	5	25	98	69	3 189.46
Incidence of Unemployment	62					32				

also reaches to this conclusion that there is under-employment in the watershed to the extent of 45.5 per cent as only 54.5 per cent labour force is utilized.

A season-wise break-up of employment indicates that it is the June-August quarter which offers the maximum employment followed by March-May quarter. Apparently, the winter season (December-February) provides the least employment. The idle period between the harvest and the next sowing alone accounts for the unevenness in work days among seasons as noted at the outset.

#### 3.4 Work Time Deposition of Female Workers

Looking at the time-disposition by hours everyday, it is observed that the women are hardly under-employed, given their multifarious activities. They work on an average 11 hours a day in various activities (Table 3.12).

About 10 hours of their work time is more or less equally divided among three activities : cultivation, household activities and animal husbandry. The remainder amount of time, slightly less than one hour is devoted to child-rearing. Here, it is important to note that the aforesaid work-disposition presents the situation during peak agricultural season, i.e., June-July, therefore, it can not be strictly generalized for the whole year. None-the-less, broad generalization can be drawn from these figures regarding the women servitude to the hard economic life of their habitat.

Table 3.12 : Average Per Day Female Work Time Disposition

Average hours of work per day	culti- vation	Household activities	Animal Husbandry	Child rearing
0	1	1	3	68
0.5	-	-	-	9
1.0	-	-	-	76
1.5	-	-	-	3
2.0	2	3	2	40
2.5		4	1	-
3.0	70	63	67	2
3.5	7	8	16	-
4.0	116	93	16	-
4.5	1	4	5	-
5.0	11	20	8	-
6.0	-	2	-	-
Average	3.56	3.53	3.41	0.82

### 3.5 Job Preferences of the Unemployed

Further, it was also observed during the investigation period that a sizeable number of under-employed exclusively males seek work intermittantly. Alongwith the overtly unemployed, their job and place of job preference were noted



(See Appendix IV). It was found that the over two-thirds of them indicated their native village as preferred place for a job and further over half of them preferred to work on construction works.<sup>21</sup> The most plausible reason for such preference seems that it is difficult for them to afford the cost of a change of their work place. A few unemployed mostly overt unemployed preferred jobs outside the village/district. They reported services, trade or business as the preferred job.

### 3.6 Conclusion

It can be concluded on the basis of the estimates based on various sets of data that overt - unemployment is not a serious problem in the region, as its magnitude is hardly around 1 per cent of overall labour force. This is possibly because of out-migration of a sizeable proportion of male workers especially in the hilly parts - Almora and Pithoragarh. At the same time, urban unemployment could be considered to be of a substantial magnitude. The various estimates put it around 4 to 5 per cent of urban labour force. Also, unemployment among the educated is considerable and mostly concentrated in the urban areas.

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<sup>21</sup> Such a situation has also been observed elsewhere. Cf. 'Report of the Committee of Experts on Unemployment Estimates 1979', Planning Commission, Government of India, op. cit., p.30.

In the rural areas, the problem of under-employment is found to be quite serious. Our sample data suggests that on average a male worker has no work for over two-thirds of the days and a female worker for almost half of the year. The problem is particularly acute in the case of male workers. In so far as the women are concerned, they work continuously during the year in one or other activity, and work in activities other than agriculture, such as animal husbandry and household work is perennial. Even on the basis of days of work, they are fully employed for around 200 days. And in each of these days, they work for about 11 hours. Even during non-agricultural seasons, they would still be working for 7-8 hours a day. Thus, they are not under-employed, may be most of the time they are over-worked.

Finally, it is noted that the under-employed are not keen to leave their village for work. May be because, they have some essential work - economic and non-economic - to perform at home and going elsewhere to work also involves extra cost of living, most of them prefer to have some work to do in the village in their spare time. The work preferred by most of them is in the construction activity. The few overtly unemployed, however, are willing to go out of village for work and offer a wider choice of activities in which they will be willing to work.

## Chapter IV

### MIGRATION

Movement of human beings from one area to another has been an integral part of the march of history, all over the world.<sup>1</sup> In present time too, flow of the skilled personnel from under-developed and developing countries to the developed countries is on the increase and is characterised as "brain drain".<sup>2</sup> Migration takes place generally from the less developed to the better developed areas everywhere. But migration from and into each area, has certain distinct features of its own and it is towards this aspect of the economy and labour force of the Kumaon region we turn our attention in this chapter, particularly focussing on the effects of migration.

The main source of data on migration has been the population Censuses. But, the available informations regarding migration from the Censuses are, however, inadequate to throw any light on the related aspects of socio-economic importance like reasons of migration and effects of migration on the place of origin. Keeping in view our

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<sup>1</sup> 'The invasion of Europe by the Huns (a nomad race of Central Asia) in the fourth and fifth centuries is an instance of migration on a gigantic scale'. (Census of India, 1961, U.P., General Report on the Census, Part I-A(1), p.401.)

<sup>2</sup> Ghosh, B.N. & Ghosh, Roma, 'Brain Drain' : A Project Study', The Indian Journal of Labour Economics, Vol. XXIV, April-July, 1981, p.55.

research objectives, in order to fill in this data hiatus, we collected information on some of these aspects from the households, selected in the sample study conducted by us in the four villages of district Pithoragarh. The main focus of our investigation was to know why people move and what impact their migration produces on the place of origin, especially on the population structure, production and household income.

#### 4.1 Nature of Migration

Like other hill regions, exodus of the population from the Kumaon hills towards plains regions has been a common phenomenon in its economy.<sup>3</sup> Most migration from Kumaon region has been of single adult males and of semi-permanent, and very little permanent. This is mainly because of the two reasons. Most migrants own land in the villages and do not want to dispose it off because of the fact that the possession of the land is usually regarded as a matter of social prestige and provides the last economic resort. Secondly, a large number of out-migrants have traditionally been going into armed forces where owing to the distinct

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<sup>3</sup> Watton, H.G., 'Almora : A Gazetteer', Vol. XXXV, Government Press, Allahabad, 1928, pp. 82-83.



nature of job, they are frequently transferred from one place to another. This makes difficult for them to keep their families with them. They do, therefore, visit their villages every year to look after their families. After retirement, they return permanently to their villages. This feature of migration is observed generally and is also confirmed by our sample data.

Some earlier studies<sup>4</sup> evidence that migration in its seasonal or periodical form had also been a special feature in the economy of the Kumaon in the past. Part of this migration was in pursuit of off-season employment and part on account of extreme cold in the higher ridges in winter. The latter category consists primarily of the movements of Bhotia tribes who traded with Tibet and lived in the higher ridges around the Himalayan border during the summer and descended to lower ridges both for climatic and occupational reasons during the winter. But, now this sort of migration is not much in evidence due to ban on trade with Tibet and

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<sup>4</sup>A preliminary Census was taken in all hill districts during the autumn of 1900. The final figures adopted were those of March 1, 1901. The difference between the two totals for Almora district are more interesting. In the autumn of 1900, the total population was returned at 501,938, and on March 1, 1901 at 465,893. Also, at the preliminary Census the population of Malla Darma was 5995; on 1st March, it was 325; in Byans the figures were 3225 and 68', Almora A Gazetteer by H.G. Walton, p.82.

most Bhotia households have settled in one location or the other permanently. The off-season migration to tarai area for short-term employment was particularly significant during the period of colonisation of plains parts of Nainital and adjoining districts. That having been over long back, this kind of migration has also declined during the recent decades.

Migration streams of different kinds in Kumaon region and its districts, as recorded in 1961 Census are given in Table 4.1. It is seen from figures in the table that the nature of migration in the region as a whole is preponderately rural to rural (55 per cent). This feature, which is common to other regions as well and most of it is accounted for by migration of women from place of birth to elsewhere, on their marriage.<sup>5</sup> The next largest component of migration consists of rural to urban migration, which is the most important kind of migration from an economic viewpoint. In the case of urban-ward migration males outstrip females, as it is the males who go out to seek employment in the urban areas. It is significant to note that urban to rural

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<sup>5</sup> Bose, Ashish; Desai, P.B. (1974); Mitra, Ashok; Sharma, J.N. (ed.), 'Population in India's Development 1947-2000', Vikas Publishing House, Pvt. Ltd., Delhi, op. cit., 270.

Table 4.1 : Migration Streams in the Kumaon Region, 1961

	P=Person M=Males F=Females	Rural to Rural	Rural to Urban	Urban to Rural	Urban to Urban	Total
Almora	P	53.75	30.03	4.04	12.18	100.00
	M	45.14	37.44	4.00	13.42	100.00
	F	63.54	21.59	4.09	10.78	100.00
Pithoragarh	P	63.83	24.73	5.21	6.23	100.00
	M	48.62	36.20	6.89	7.98	100.00
	F	77.90	13.89	3.63	4.58	100.00
Nainital	P	51.68	10.93	11.57	25.82	100.00
	M	37.94	16.58	11.87	33.61	100.00
	F	57.80	8.43	11.43	22.34	100.00
Kumaon Region	P	55.28	24.70	5.96	14.60	100.00
	M	44.85	34.14	5.74	15.27	100.00
	F	64.62	16.24	6.16	12.98	100.00

Source : Census of India, 1961, Uttar Pradesh, General Report on Census, Volume XV, Part I-A(1).

migration is also perceptible in Kumaon, mainly because of the return of semi-permanent migrants and their children borne in urban areas where they were employed. A look at the district-wise figures brings forth the fact that in Almora and Pithoragarh, rural-rural and rural-urban streams

make up over four-fifths of migrants; while in Nainital, around two-fifths is made up by urban-rural and urban-urban migrants. This difference in pattern of migration could be explained in terms of their varying levels and pattern of urbanization. Almora and Pithoragarh have only a few towns, besides the district towns to which most migration takes place from rural areas. Nainital has quite a few sizeable towns and a sizeable inter-town migration takes place.

It may also be noted that, barring rural-rural migration, an overwhelming proportion of migrants migrate outside the region and mainly for employment in defence services. Major part of this migration is to the urban areas. Also, most of the out-migration is 'voluntary' and while most in-migration is involuntary following the postings, transfers, retirements etc. This is particularly true of the hilly districts of Almora and Pithoragarh.

#### 4.2 Extent of Migration

The volume of gross migration in India according to the 1961 Census is estimated to be, over 30<sup>6</sup> per cent, that

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<sup>6</sup>Bose, Ashish, 'Migration Streams in India', in Proceedings of the 1967 (Sydney) Conference, International Union for the Study of Population, 1968, p.121.



is, this proportion of population was born outside the towns or villages in which they resided in 1961. The gross migration in Kumaon region as can be seen from figures in Table 4.2 is of somewhat lower extent, but it does not include migration within the region/district, but only the migration out of and in to the region/district. Considering that, the volume of gross migration (immigration + emigration), estimated at 23 per cent in 1961 and 20 per cent in 1971, can be taken to be quite high. The largest volume of gross migration, 41 per cent in 1961 and 29 per cent in 1971 was recorded in Nainital, but most of it consisted of in-migration. In contrast, Almora and Pithoragarh emigration out-numbers immigration. While Nainital gained about 20 per cent of population through migration, Almora and Pithoragarh lost about 9 per cent and 7 per cent respectively, as per the 1971 Census. For this reason, the region as a whole recorded a net-immigration.

Almora had the highest proportion (17 per cent) of its population migrating outside the district in 1961, followed by Nainital and Pithoragarh. Despite a decline in 1971, Almora continues to have the highest out-migration, but the next place is taken now by Pithoragarh with a figure of around 11 per cent. In-migration has slightly increased

Table 4.2 : Percentage of In-migration, Out-Migration and Net Migration to the Population in the Kumaon Region, 1961 and 1971

Migration	Years	Almora	Pithoragarh	Nainital	Kumaon Region
Immigration	1961	3.3	3.1	33.1	13.2
	1971	3.6	4.0	24.3	10.6
Emmigration	1961	16.8	5.4	8.0	10.1
	1971	13.0	10.6	4.8	9.5
Net-Migration	1961	(-) 13.5	(-) 2.3	(+) 25.1	(+) 3.1
	1971	(-) 9.4	(-) 6.6	(+) 19.5	(+) 1.1

N.B. : (+) denotes net immigration and (-) net out-migration

Sources : i) Census of India, 1961, Uttar Pradesh, General Report on the Census, Part I-A(i).

ii) Census of India, 1971, Uttar Pradesh.

both in Almora and Pithoragarh, but due to high out-migration these two districts have continued to be characterised by a significant net out-migration. Nainital, on the other hand, has a large net in-migration.

It is evident (Table 4.3) that a large part of in-migration in Nainital district and out-migration from Almora and Pithoragarh reflects the movement of people from the latter to the former. This is suggested by a conspicuously

Table 4.3 : Migration to Contiguous and Other Districts of the State from Kumaon Region in 1961

	<u>To Contiguous Districts</u>		<u>To Other Districts</u>		<u>Total</u>	
	<u>Males</u>	<u>Females</u>	<u>Males</u>	<u>Females</u>	<u>Males</u>	<u>Females</u>
Almora	45602 (42.81)	40636 (38.15)	12143 (11.40)	8144 ( 7.64)	57745 (54.21)	48780 (45.79)
Pithoragarh	3836 (26.93)	3587 (25.18)	3666 (25.73)	2157 (22.16)	7502 (52.66)	6744 (47.34)
Nainital	20103 (43.85)	15327 (33.43)	5954 (12.99)	4463 ( 9.73)	26057 (56.83)	19790 (43.17)
Kumaon Region	69541 (41.74)	59550 (35.74)	21763 (13.06)	15764 ( 9.46)	91304 (54.80)	75314 (45.20)

N.B. : Figures in parentheses denote percentage to total migration.

Source : Census of India, 1961, Uttar Pradesh, General Report on the Census, Part I-A(i), pp.421-422.

larger figure of migration to the contiguous districts as compared to other districts. This is equally true of males as well as females. Distance thus seems to affect migration in-so-far-as most movements are to the nearby places.<sup>7</sup> A larger proportion of female out-migration to

<sup>7</sup>Cf. Connell, J.; Dasgupta, B.; Laishley, Rand Lipton, M. (1979), 'Migration from Rural Areas : An Evidence from Village Studies', Oxford University Press, Delhi, op. cit... p.206.

the contiguous districts also consists of marriage migration. Similarly, the higher volume of male out-migration to other districts in Pithoragarh reflects the migration due the employment in defence services. At the same time, female out-migration to other districts too is exceptionally higher in Pithoragarh. This appears, most plausibly, due to the settling of people in the tarai and bhabar areas of Nainital district during the late fifties.

#### 4.3 Causes of Migration

We now come to certain qualitative questions relating to migration, such as causes of migration, characteristics of migrant households, effects of migration on income, employment and production levels etc. The available secondary data, primarily from the Census, throws little light on these aspects. We, therefore, base our analysis of these aspects on the data collected through a sample study of 200 households conducted by us for this purpose.

It may be noted here that 13 per cent of the persons and 21 per cent of the labour force were found to have migrated out in the sample households.

It is generally believed that the migrants belong mostly to the economically poorest sections of villages. It is also



stated that households of the landless and cultivators with very un-economic holdings have generally a high tendency to send out-migrants than substantial cultivators. But, our data (Table 4.4) suggests that the incidence of migration is higher among the relatively larger landholders than amongst the marginal holders or the landless,

Table 4.4 : Landholding Size and Migrants Per Household

Landholding Size	Households with Migrants						Households with out migrants	Total households	% Households with migrants	Total migrants	Migrants per household
	1	2	3	4	5	Total					
0 - 0.5	17	7	1	2	-	27	44	71	38.03	42	0.59
0.5 - 1.0	22	9	2	2	1	36	37	73	49.32	59	0.81
1.0 - 2.0	23	4	1	-	2	30	13	43	69.76	44	1.02
2.0 - 2.5	1	1	1	-	3	6	3	9	66.67	21	1.00
2.5 - 5.0	1	1	1	-	1	4	-	4	100.00	11	2.33
5.0 & Above	-	-	-	-	-	-	-	-	-	-	-
Total	64	22	6	4	7	103	97	200	51.5	177	0.89

N.B. : Out of 177 migrants, for 24 migrants detailed information was not available for about their current jobs and earnings. Therefore, the subsequent analysis has been confined to the rest, 153, migrants only.

whether indicated by (i) percentage of households with migrants, or (ii) number of migrants per household. Given the fact that the average size of family does not differ significantly among different size holders, the migrant/population ratio thus has a positive association with size of landholdings.

This tendency is thus apparently contrary to the general hypotheses regarding the relationship between economic status of the households and migration. This could be attributed to one of the two possible reasons. Either, the landless or marginal holders are not necessarily economically very poor and have other regular sources of livelihood; or these groups are so poor that they are not able to bear the cost of migration - transport and waiting cost, and also do not have the necessary education and skills and city links to secure a job on migration elsewhere. A positive association between educational levels and tendency to migrate (Table 4.6), tends to support the latter hypotheses.

The basic reason of migration continues to be economic in nature.<sup>8</sup> Income of urban/industrial workers is decidedly

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<sup>8</sup> Chandra, Ramesh, 'Migratory Labour from U.P. and Rajasthan', The Indian Journal of Labour Economics, Vol. XIII, No. 3 & 4, October 1970, January 1971, pp.85-95. Also see Todaro, M.P., 'Education and Rural Urban Migration': Theoretical Constructs and Empirical, Evidence from Kenya. Paper presented to the conference on Urban Unemployment in Africa, IDS, Sussex, 1971, (mimeo.).

higher than those of the workers in rural/agricultural sector and, therefore, there is always incentive for workers to move from agricultural sector. In the case of rural-urban migration, the current, and more particularly the life time earnings differentials are considered to be the major factor.<sup>9</sup> Under Indian conditions, where pressure of consistently increasing population on land has increased to such an extent that addition to labour force in agriculture does not add to output and thus increase in the sheer number of workers on land merely means that the same output will be shared by still large number, it is argued that the mere shift of workers from agricultural sector where the marginal productivity of these workers is zero or near to zero, to industrial sector can augment the productivity and output.<sup>10</sup>

Given the fact that even the 'larger' landholders have relatively small earnings in the region of our study, it was expected that most migrants move out to improve their incomes, though they may not have been completely unemployed. This is well indicated by our sample data,

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<sup>9</sup> Todaro, M.P. (1976), 'Internal Migration in Developing Countries', International Labour Office Geneva, p.65.

<sup>10</sup> Nurkse, Ranger (1973), 'Problems of Capital Formation in Under-developed Countries', Oxford University Press, Delhi, op. cit., p.32.

as nearly 92 per cent migrants are reported to have migrated due to inadequate income as against about 6 per cent due to the lack of employment opportunities in the villages (see Table 4.5). Interestingly, only 2 migrants (1 per cent) migrated on account of irregular availability of work. During the investigation, it was observed that indebtedness of villagers also compelled some persons to migrate outside the village to earn to repay the debt.<sup>11</sup>

Our investigation also went to support the observation that migration from the villages was found to be exclusively male selective. It was also noticed that the joint family system still exists in the villages and makes it easier for some members of the family to move out. And, availability of labour exchange (especially among relatives) system facilitates replacement of absentees for carrying out agricultural operations. If one has to view causes of migration in terms of the general dichotomy of "pull and push factors", the out-migration from Kumaon villages may be regarded as motivated primarily by 'push' factors, or a combination of both in which push factor dominates.

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<sup>11</sup> According to the 'Second Agricultural Labour Enquiry Report' the average annual income of an agricultural household calculated on the basis of whole-sale prices, was Rs.437 per annum in 1956-57, whereas average expenditure was Rs.617 during the same period, thus, leaving the deficit of Rs.180'.



#### 4.4 Characteristics of Migrants

##### 4.4.1 Age

The predominance of economic motivation in migration is well testified by the fact that an overwhelming majority (90 per cent) of the migrants moved out in the prime of their working life, i.e., at the age of 15-35 years. This alongwith the corresponding average age 20 years suggests that most migrants leave their village at the lower end of their working age period.<sup>12</sup> Migration below the age

Table 4.5 : Age at Migration and Reasons for Migration

Age-groups	Migration Reasons*					Total	Average age
	1	2	3	4	5		
0 - 15	1	1	12	-	-	14	14.80
15 - 35	9	1	127	-	1	138	20.03
35 - 50	-	-	1	-	-	1	40.00
50 +	-	-	-	-	-	-	-
Total	10	2	140	-	1	153	-

\* 1. Not work available at all; 2. Work only irregularly available; 3. Inadequate income; 4. Attraction of city life; 5. Any other.

<sup>12</sup> The Khanna study found that the net loss, to eleven Punjabi villages, of males aged 15-24 was "nearly three times greater than for children, or for men 25-44 years old. Above 45 the net loss was negligible". Wyon, J.B. & Gordon, J.E., The Khanna Study : Population Problems in Rural Punjab, Cambridge (Mass), Harvard University Press, 1971, p.214.

of 15, to the extent of 9 per cent, may mostly reflect the phenomenon of the children accompanying their parents and only to a limited extent, for reasons of employment. Interestingly, only 1 migrant moved out after the age of 35, which implies that migration after the passage of youth is rare. Migrating at an early age, it was observed, most migrants were unmarried at the time of migration.

#### 4.4.2 Education

Migration is also found to be selective by education. A higher incidence of migration among the educated is attributable both to the better awareness and resourcefulness of the educated to migrate and relatively better chances of the educated to secure jobs.

Our data (Table 4.6) reveal a bimodal pattern of migration and denotes that the propensity to migrate

Table 4.6 : Migrants by Educational Status

Educational Status	Population	Migrants
1. Illiterate	718	14 ( 1.95)
2. Primary	353	83 (23.51)
3. Secondary	117	51 (43.51)
4. Higher	19	5 (26.32)
Total	1207	153 (12.68)

N.B. : Figures in parentheses denote percentage to population.

increases with the acquisition of educational qualifications.<sup>13</sup> Apparently, as against about 2 per cent migrants among illiterate, they were 23 per cent and 44 per cent among those with primary and secondary education, respectively. The proportion of migrants among those with post-high school education was somewhat lower, but still quite high at 26 per cent. On the whole, it may be pointed-out that the process of education acts as a sieve, through which the most young people move to towns/cities.<sup>14</sup> Thus, the educational pattern of migration appears similarly polarized as the economic pattern.

Migration from the region of our study seems mostly purposive and planned. Over 54 per cent migrants had job fixed for them before leaving their villages, while another 22 per cent moved with assurance for job. 24 per cent, however moved with the intention to find a job themselves constituted 22 per cent each. In terms of the activity

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<sup>13</sup> Cf. Connell, J; Dasgupta, B; Laishley, R. and Lipton, M., (1976), Migration from Rural Areas : The Evidence from Village Studies, Oxford University Press, Delhi, p.59.

<sup>14</sup> Myrdal, Gunnar (1968), Asian Drama, Allen Lane, The Penguin Press, Vol.III, pp.1644-1660.

status before migration, 68 per cent were either inadequately employed in terms of income and, 32 per cent students. This goes to support the earlier finding that most migrants move as they do not have work with a reasonable level of earnings; and the rest do not find suitable jobs for themselves in the village once they acquire some educational qualifications.

#### 4.5 Effects of Migration

##### 4.5.1 On Age and Sex Composition

Selectivity of migration in terms of sex, age and education obviously effects population and labour force adversely. Absence of many young men from the villages results in the increase in the proportion of other groups, namely, women, children, or the old in the population. Thus, out-migration results in denudation of population with such qualities as skills, education and entrepreneurship.<sup>15</sup>

The peculiar age and sex composition of hill region of Kumaon have been noted earlier and is further elaborated

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<sup>15</sup> Planning Department, Uttar Pradesh, 'Draft Sixth Five Year Plan, 1980-85, (Review)', Vol.I, p.127.



here (Table 4.7) on the basis of our sample data. It is seen that the number of females per 1000 males is 1075 in total population; it is less than 1000 in other age-groups but it is as high as 1404 in the working age group. That this is a result of migration is indicated by the fact that the sex-ratio is much higher (1085) in the households with migrants and substantially lower (918) in those without migrants (see Appendix V).

Table 4.7 : Age and Sex Composition of the Population

Age-groups	Persons	Males	Females	Sex-ratio Females per 1,000 Males
0 - 5	146	81	65	802
5 - 15	286	150	136	907
15 - 50	464	193	271	1404
50 & Above	158	84	74	881
Total	1054	508	546	1075

The sex composition of workers by occupational classifications also reflects the results of out-migration of male workers from the villages (Table 4.8). Overall, there are more women workers than men. This phenomenon

Table 4.8 : Sex Ratio of Workers in Different Occupation

Occupations	Persons	Males	Females
1. Agriculture and Animal Husbandry	459	168	291
2. Wage Labourers	87	87	0
3. Services	14	12	2
Total	560	267	293

is particularly marked in agriculture and animal husbandry where almost two-thirds workers are women. It is further interesting to note that there are 560 total workers as against 464 persons in the working age-group, suggesting that the absence of male adult workers is compensated not only by women but also marginally by children taking to work.

Besides, some other effects on the demographic aspects are worth noticing. This is shown by the unmarried status of most migrants at the time of migration. Migration tends to delay marriage. Further, late marriage will reduce the 'at-risk' period of females which per se reduce the number of children born to the average women in the village. Thus, migration tends to slow the birth

rate also.<sup>16</sup> The relatively low birth rate in Kumaon as observed earlier, may partly be accounted for by this factor. Domination of emigrant streams by young men also strengthens village gerontocracy on the one hand, and impaires the sex-parity resulting in feminization on the other.<sup>17</sup> Some indicators to this effect can be observed in the rural areas of the Kumaon region, though it is difficult to provide direct and quantitative evidence in this respect.

#### 4.5.2 Remittances

Low family incomes inadequate to support members of family left behind in the villages, necessitates that migrants send remittances to their families. Remittances in common parlance refer to money remitted to villages by the migrants while they are away; but the meaning can be extended to include goods brought on visit to home and savings brought back by the returning migrants also.

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<sup>16</sup> Cf. Connell, J.; Dasgupta, B; Laishley, R.; Lipton, M. (1979), 'Migration from Rural Areas', Oxford University Press, Delhi, op. cit., 140. Also see Oberai, A.S. & Singh, H.K.M., 'Migration, Urbanization and Fertility : The Case of the Indian Punjab', Artha Vijnana, Sept-Dec 1981, Vol.23, Nos. 3 & 4, p.274. This argument, however, is weakened by the fact that migrants returning homes only occasionally are unusually successful in inducing conception in their wives. Dandekar, K. (1969), 'Demographic Study of Six Rural Communities', Gokhale Institute of Politics & Economics, Poona.

<sup>17</sup> Ibid, pp.147-148.

Need to remit money is always governed by household income which means that migrants belonging to relatively poor households are more likely to send remittances, if they can afford. It is observed that migrants from smaller holdings do have relatively more propensity to remit than those with larger holdings. Similarly the higher propensity among the scheduled castes to remit than the upper castes is explained by the fact that the low caste people are more poverty-ridden groups whose households are in greater need of remittances to meet current consumption expenses.<sup>18</sup> In addition, the married migrants are more likely to remit than the unmarried. The size of remittances is likely to be smaller if the decision to migrate has been taken independently by the migrant individual, and greater if the decision is linked to the needs of the households especially, if it is a 'target' migration.<sup>19</sup> We examine some of these proportions below on the basis of our survey data.

#### 4.5.3 Size of Remittances

Levels of earnings of migrants and the initial purpose of migration together are found to affect the general level

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<sup>18</sup> Oberai, A.S. and Manmohan Singh, H.K., 'Migration, Remittances and Rural Development : Findings of a Case Study in the Indian Punjab', International Labour Review, Vol.119, No.2, March-April 1980, pp.230-31.

<sup>19</sup> Balan, Jorge (edited), (1981), 'Why People Move', The UNESCO Press, p.47.



of remittances. About 85 per cent of the migrants of our sample sent remittances to their relatives left behind (Table 4.9). The migrants very low earnings per month (less than Rs.300), send no remittances. Of those earnings the range of Rs.300-500 in which most migrants fall, 80 per cent and of those in the next higher earnings range, 86 per cent send remittances. Of the few in earnings ranges above Rs.750 per month over 60 % send remittances. Remittances increase consistently with the rise in monthly earnings of the migrants. It is observed that most of those who send remittances do so fairly frequently. The strong commitment of migrants to return to their native villages is regarded the main reason for the steady and substantial flow to remittances from migrants to village.<sup>20</sup> Besides, distance does not appear to affect the size of remittances. As regards period of migrants away from villages, according to our study, there seems no evidence that family ties loosen over-time.<sup>21</sup>

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<sup>20</sup>Connell, J.; Dasgupta, B.; Laishley, R. and Lipton, M. (1979), 'Migration from Rural Areas : The Evidence from Village Studies', Oxford University Press, Delhi, p.93.

<sup>21</sup>This conclusion is based on data for a one-year period. Nothing can be said about whether or not it would hold true for longer periods'.

Table 4.9 : Monthly Earnings of Migrants and Annual Remittances

Monthly Earnings	0	Annual Remittances				Total	Percentage Remitting Migrants	Average Remittances
		1-600	600-1000	1000-1500	1500-2500			
300	4	-	-	-	-	4	0	0
300 - 500	13	11	38	34	19	117	80	1089.31
500 - 750	3	3	6	7	4	24	86	1166.66
750 -1000	2	-	1	-	2	6	67	1516.66
1000 +	1	-	-	-	-	2	50	4000.00
Total	23	14	45	41	25	153	85	1127.77
Average	0	485.71	932.22	1280.48	2012.00	4200.00	1127.77	

#### 4.5.4 Uses of Remittances

The use pattern of remittances reflects one of the important aspects of the impact of migration on the economy of migrant's native households. Since inadequate current income in the village is the predominant motivation in migration, it is not surprising to find that the major purpose for which remittances are spent is current consumption (Table 4.10). Over three-fourths of the households spend major part of remittances for this purpose. Building construction (6 per cent) comes next in order. At the other end, 3 per cent households spent remittances on ornaments. Those who keep remittances as deposits or lend them to others account for 4 per cent each. A few households use remittances to defray family debts,<sup>22</sup> and around 3 per cent spent remittances mainly on their children's education. Expenditure on education, though certainly a good use, tends to stimulate further migration as educated always try to emulate the successful migrants.<sup>23</sup>

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<sup>22</sup> In Spring 1973, several agricultural labour migrants from eastern U.P. to Punjab were remitting income mainly to defray consumer debt in their home village, so as to avoid the need to sell land', (Connell, J., et. al. Migration from Rural Areas, p.98).

<sup>23</sup> Simon, S.R., 'Changes in Indian Consumption and Investment in a Eastern Uttar Pradesh Village, 1954 to 1964-65', Connel University 1966, Unpublished Ph.D. Thesis.

Table 4.10 : Utilization of Remittances

Utilization	Annual Remittances						Total Households	
							Number	Per cent
	500	600- 1000	1000- 1500	2000- 2500	2500+			
1. Current Consumption	14	43	40	20	3		120	76
2. Building Construction				5	5		10	6
3. Land Purchasing			1	1			2	1
4. Household Durables		1		1			2	1
5. Ornaments			2	2			4	3
6. Deposits		3	2				5	4
7. Loan to Others	1	1	3	1			6	4
8. Repayment of Old Debt		2	0	1			3	2
9. Children's Education		1	1	3			5	3

Note : In most cases households spent on more than one item.



Although, an overwhelming majority of households spend remittances on current consumption; the figures also suggest that with larger amounts of remittances, other uses particularly house construction, also become important claimants. No household receiving less than Rs.2000 annually as remittance spends then on this item, but a good proportion of those with larger remittances invest in house building. 81 per cent of the households securing remittances upto Rs.1500 per annum or Rs.125 per month spend all the amount on current consumption. Once remittance amounts increased to over Rs.150 to Rs.200 per month, the amount is spent on item other than current consumption in 14 per cent cases, and with remittances exceeded Rs.200 per month, 62 per cent households spend major part on item like building construction, and purchase of land. Thus, the utilization of remittances suggests that, with increasing remittances, the ownership of capital assets gets more skewed. Oberai and Singh<sup>24</sup> also report the similar finding for the Indian Punjab.

#### 4.6 Migrants' Visits to Village

Link to village is manifest not only in regular or occasional remitting of money, but more so in frequent and

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<sup>24</sup>Oberai, A.S. & Manmohan Singh, H.K., 'Migration, Production and Technology in Agriculture : A Case Study in the Indian Punjab', International Labour Review, Vol.121, No.3, May-June 1982, op. cit., p.342.

regular visits to the village.

Of the migrants in our sample households, 86 per cent visited their villages during the year July 1981 - June 1982. The migrants have a strong commitment to return to their villages for various reasons. 42 per cent visited to help their families during the peak agricultural season followed by 5 per cent who visited to repair/buy the family properties

Table 4.11 : Purpose-wise Visits of Migrants

Purpose of Visits	Migrants	
	Number	Per cent
A. <u>Economic</u>	<u>61</u>	<u>47</u>
1. To help in family enterprise	54	42
2. To sell-buy-repair family property	7	5
B. <u>Social</u>	<u>70</u>	<u>53</u>
1. To attend caremonies	25	19
2. To visit relatives	41	31
3. Any other	4	3
Total	131	100.00

especially buildings. This in turn indicates that the depletion of male workers, to some extent, is made good by their visits during the agricultural season. Majority (53 per cent), of course, visited for no specific economic reason :

31 per cent came to meet their relatives and 19 per cent to attend ceremonies, especially wedding. A few (3 per cent) migrants visited either to take their families with them or to leave them at home in the village. 14 per cent migrants who did not visit during the year comprise mainly of those who migrated recently or those who have their families living with them. They also do not send remittances to the village.

As regards frequency and length of visits, the modal period between trips was just under a year and the length of stay on visits was on an average 60 days. This is because of the fact that an overwhelming majority of migrants was recruited in the military services who are entitled to annual leave for two months. Distance and nature of work thus affect the frequency of visits and length of stay.<sup>25</sup> It was observed during the survey that migrants working about 50 km away from villages return usually every week-end to see their family. They find it economical to make regular trips rather than take their families with them as the cost of living especially in towns is likely to be too high for them to justify shifting the family.

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<sup>25</sup>Cf. Connell, J., et. al. (1979), 'Migration from Rural Areas : The Evidence from Village Studies', Oxford University Press, Delhi, p.121.

#### 4.7 Returned Migrants and Accumulated Savings

The semi-permanent nature of migration implies that migrants after some length of time return permanently to their native place.<sup>26</sup> We found 33 such return migrants\* in our sample. Basically, the retirement from services together with non-availability and inability to find another job, on the one hand, and inescapable family and village nexus, on the other, appear the two main factors leading to return migration.

Table 4.12 : Age at Return Migration and Accumulated Savings

Age at Return	Accumulated Savings				Total
	10000	10000- 15000	15000- 20000	20000+	
25 - 30	1	1			2
30 - 40		10	8	4	22
40 +		3	4	2	9
Total	1	14	12	6	33

<sup>26</sup> 'When the most productive part of migrants life is over, they do return to their villages as their recuperation centres hospitals, invalid and old age homes, poor houses, mental asylums and burning ghats', (Thorner, D., 'Casual Employment in a Factory Labour Force', The Economic Weekly, Vol.IX, p.124).

\* 'Returned migrants included in our survey are those who returned permanently after 1st January, 1978'. No matter when he/she out-migrated.



It is seen that most migrants return in the middle of their working life. Two-thirds migrants returned during their ages in between 30-40 years, 27 per cent after attaining the age of 40. Only 2 migrants (6 per cent) returned before the age of 25. A major reason why such age-pattern is found among returning migrants is the nature of job held by most of them. Most migrants from our sample households went into armed forces at the age of around 20-25 years and served for a specified period of 15-20 years, after which they could retire with pensionary benefits, if not promoted to higher ranks. Promotion to higher ranks than JCO's and consequent extension in the period of service is not very likely in their case because most of them do not have the necessary educational qualifications.

The returned migrants brought some accumulated savings with them, besides sending remittances during the period of their migration. Over two-fifths of them brought in upto Rs.15000. Those who repatriated between Rs.15000-20000 and more than Rs.20000 accounted for 36 per cent and 18 per cent respectively. There was, however, only one migrant who returned with an accumulated savings below Rs.10000. As noted earlier, the migrants generally return after 15 to 20 years of service. In general, it is observed that longer they stay away as migrant, as reflected by the age at which the migrants return, larger is the amount of accumulated savings they bring in.

It is significant to note that the utilisation pattern of accumulated savings is quite different from that of the remittance (Table 4.13). No doubt, the accumulated savings, like remittances, are spent on all kinds of uses, but if we

Table 4.13 : Utilization of Accumulated Savings

Sl. No.	Uses	Number of Migrants	
		Main Use	All Use
1.	Current consumption	2	33
2.	Building construction	11	11
3.	Land purchasing	4	4
4.	Household durables		7
5.	Ornaments		1
6.	Bank deposits	14	17
7.	Loan to others		3
8.	Any other (especially Marriage ceremony)	2	4
Total		33	80

look at the uses to which major part of accumulated savings are put, we find that deposits in the bank and house construction feature as the items in around four-fifths of the cases, while in the case of remittances similar predominance of current consumption was noticed. Current consumption

obviously features as an item of use of accumulated savings also in all cases, but only as a minor item. Only in 6 per cent cases most accumulated savings were used in current consumption. It is clearly evident that accumulated savings contribute mostly to capital formation while remittances to current consumption.

#### 4.8 Effects on the Levels of Household Incomes

Remittances from migrants play an important role in augmenting the household incomes in the villages. Table 4.14 presents data on increase in the levels of household income as also per capita income of households with out-migrants, resulting from remittances. It is evident that the remittances raise the average income of these households and in turn per capita income by about 36 per cent. It is not that a household with migrants has higher income than the one with no migrant; nor does the income necessarily rise with the increase in the number of migrants. It is, however, seen that increase in the households and per capita income increases due to remittances, in line with the number of migrants a household has sent out. The highest gain in income of about 178 per cent is had by households with 3 migrants. Beyond it, incomes experience an abruptly declining increase (about 90 per cent). All this leads us to conclude that the

Table 4.14 : Income Levels Without and with Remittances (1981-82)

Number of Migrants	Number of Households	Average Household Incomes		Per Capita Incomes		% Increase
		Excluding Remittances	Including Remittances	Excluding Remittances	Including Remittances	
0	97	2541.64	2541.64	495.06	495.06	-
1	66	2130.31	3503.04	417.21	686.05	64.44
2	27	2455.14	4425.21	427.62	770.89	80.25
3	7	1791.28	4991.51	241.13	671.90	178.66
4	3	2356.33	4473.00	589.08	1118.25	89.83
Overall	200	2365.19	3227.94	448.80	612.12	36.40



remittances have a significant impact in improving income levels in the villages. To a certain extent, therefore, the characterisation of the regional economy, as a 'money order economy' is justified as over one-third of the disposable income of the households is contributed by cash remittances.

Obviously, the migrants secure significant gains in their earnings on migration, and even though they remit only a part of their income, it much more than compensates any loss of earnings due to their migration. In fact 90 per cent migrants witness five-fold and higher increase in their incomes. Another 8 per cent experienced an increase of 300 to 500 per cent. The rest also improved their incomes by 200 to 300 per cent.

#### 4.9 Effects on Employment and Output

In the above estimation of income differences, we have assumed that the migrant, if he had stayed back in the village would have contributed to the family income an equivalent of the current per capita income. This may, however, not be true if the output declined more than proportionately due to one worker migrating, or then, it may not have declined if the migrant was disguisedly unemployed in the sense of having zero marginal productivity. We have

attempted to examine this question in a limited way, in the case of agricultural households. Arrangements of the relationship between migration, employment and output per acre presented in Table 4.15 suggests that 0.71 persons are the optimum to work on one acre of land as this level of

Table 4.15 : Effects on Per Acre Land Employment and Output due to Migration

Adult male migrants as percentage of male agricultural workers (including male migrants)	Employment Per Acre		Output Per Acre	
	Persons	Days	Quintals	Value Rs.
0	1.398	200.932	8.628	1123.621
0.25	-	-	-	-
.25 - .50	1.228	187.590	9.186	1084.746
.50 - .75	0.707	103.539	11.961	1340.176
.75 -1.00	0.018	3.523	8.030	1121.401

employment yields maximum output per acre. This construes that migrants belonging to households with this or higher worker-land ratio were not in fact required and thus were disguisedly unemployed; and migration from households with a lower worker-land ratio would lead to a decline in output. The latter fact is testified by an abrupt decline in per acre output in the cases represented by the last column of the table. In this respect, our field observation also

tends to support this contention that most of the families keep or prefer to keep one adult male from migration especially to plough the land and to look after the family.

In the aggregate, however, there does not seem to occur any production loss due to migration in-so-far-as our sample yields a figure of 0.70 male workers per acre of land as against the optimum of 0.71. On this basis all the remittances and accumulated savings on return, constitute a net gain to the regional economy. Any further loss of male workers through migration may, however, affect production adversely to some extent. But the net benefit of migration would still continue to be highly positive.

#### 4.10 Conclusion

One of the important features of migration from the Kumaon region has been single migration of male adults which is semi-permanent in nature. If we ignore rural to rural migration preponderated by female migration due to marriage, then rural to urban migration is the most important component. However, in the case of Nainital, urban to urban migration is significant. Generally, the Kumaon is associated with out-migration but it is basically true of Almora and Pithoragarh where extent of out-migration accounts for from 10 to 15 per cent of population.

Major cause of migration is economic reflected by low incomes but it is not necessarily the poorest who migrate most often. In fact, tendency to migrate is among not so poor with at least a few acres of land. But, even these households are not really very well-off in absolute sense but have some excess to education and other resources which facilitate migration. The educated, de facto, have a much higher incidence of migration than amongst the uneducated.

Since migration is selective as it is mainly confined to males in between 20-35 age-group, it obviously affects structure of population and labour force in the region. As has already been noted in earlier chapter, the population of Kumaon is characterised by a large proportion of children, a sex-ratio more than 1000 and majority of women in the labour force. On the other hand, there is evidence to suggest that migration tends to delay marriage and reduce birth rate in the region.

The adverse economic effects of migration on the regional economy, however, do not seem significant. Production loss due to loss of labour force is not found significant while remittances from migrants are sizeable.

Remittances raise the income levels by over one-third but most of them are utilized in current consumption. On



the other hand, migrants particularly those serving in armed forces who are in large numbers return permanently to the village in the middle of their working age, thus, still able to work and more importantly bring sizeable accumulated savings with them which generally go towards capital formation.

## Chapter V

### STRUCTURAL SHIFTS IN THE LABOUR FORCE

Having discussed the growth of population and labour force, unemployment and migration in preceding chapters, we now turn to the employment structure of the working population in the regional economy of Kumaon. The employment structure is discussed here in terms of the distribution of the working population into different major occupations of the economy. We have adopted here the broadest classification of occupations in terms of the three sectors, primary, secondary and tertiary. Proportions of labour force in these sectors and changes in them, thus, constitute the subject matter of discussion in this chapter.

The primary sector relates to the production of primary goods. In fact, these are the goods which are produced primarily with the help of nature, and are first to get produced in any economy as they provided mostly the bare essential needs for human existence. In other words, occupations included in the primary sector are agriculture, fisheries, hunting and mining. Secondary sector, in essence, includes activities that relate to processing and reprocessing of the produce of the primary sector. This sector, thus includes manufacturing, generation of electric power and gas and construction.

Tertiary sector consists of service activities allied to or independent of the primary and the secondary sectors. All the activities of the tertiary sector may broadly be classified into three broad groups<sup>1</sup> : (a) those which produce the services bought directly by the consumer (various professional, personal and domestic services, recreation, etc.); (b) those which facilitate the movement of goods and persons (e.g. trade, transport and communication, brokerage, finance and handling of real estate); and (c) public services (e.g. administration, social welfare, education, public health including water supply, police and law enforcement. Services like education and health may be included in (b) if they are mostly provided by the private agencies. The three groups may broadly be designated as personal services, infrastructure services and administrative and social services.

### 5.1 Occupational Structure and Economic Development

It is generally observed that there is a close relationship between development of an economy on the one hand, and occupational structure, on the other; and economic progress is generally accompanied by certain distinct and predictable

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<sup>1</sup>Traintis, S.G., 'Economic Progress, Occupation Redistribution and International Terms of Trade', Economic Journal, Vol. LXIII, 1953, pp. 627-673.

changes in occupational structure. According to the one generally accepted viewpoint,<sup>2</sup> a high average level of income per head is always associated with a high proportion of the working population engaged in secondary and tertiary sectors. As against this, low real income per head is always associated with a high proportion of the working population engaged in primary production. It is observed that in the course of development of any economy there has been a steady shift of employment and investment from the essential primary activities to secondary activities of all kinds and, then progressively into tertiary production.<sup>3</sup> These tendencies are well demonstrated by international evidences which suggests that the more backward an economy, the greater is the proportion of population dependent upon agriculture and less on industry.<sup>4</sup>

A cross country comparison of per capita income and distribution of labour force into the three sectors of activities presented in Table 5.1 goes well in support the hypothesis of an inverse relationship between level of

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<sup>2</sup>Clark, Colin, 'The Conditions of Economic Progress', Macmillan (2nd ed.), London, 1957, p.230.

<sup>3</sup>Fisher, A.G.B., 'Economic Progress and Social Security' (1945), pp.5-6.

<sup>4</sup>Kuznet, Simon, 'Six Lectures on Economic Growth', The Free Press of Glencoe, Illinois, 1959.



development and proportion of working population engaged in the primary sector. The developed countries like the U.S.A., U.K., Canada, West Germany, etc., with a higher per capita income have a low proportion of working population dependent on agriculture. As against it, under-developed countries like India with very low per capita

Table 5.1 : Occupational Distribution of Labour Force and Per Capita Income in Selected Countries

Country	Year	Per capita income in US \$	Percentage of Labour Force		
			Agriculture	Industry	Services
U.S.A.	1960	2502	7	36	57
	1979	10630	2	32	66
U.K.	1960	1261	4	48	48
	1979	6320	2	42	56
Canada	1960	1909	13	35	52
	1979	9640	5	29	66
West Germany	1960	1222	14	48	38
	1979	11730	4	47	48
France	1960	1202	22	39	39
	1979	9950	9	39	52
Japan	1960	417	33	30	37
	1979	8810	13	38	49
India	1960	69	74	11	15
	1979	190	71	11	18

Source : United Nations Statistical Yearbook 1971 and World Development Report 1981.

income have an overwhelming proportion of active population engaged in agriculture. The figures also suggest that even in the same country, as the level of per capita income improves the proportion of labour force engaged in agriculture declines and that of industry and services increases.

#### 5.2 Long Term-Trends in the Occupational Structure of the Working Force in India, 1901-71

In the light of above observations, we now proceed to examine the Indian evidence in this regard since the turn of the present century. The most structuring feature of the occupational structure in India, as seen in figures in Table 5.2, is that the Indian economy has not only retained its predominantly primary-producing character, but also there has been hardly any change in the proportion of labour force in the three sectors. It is observed that the percentage of workers engaged in agriculture has been nearly stationary around 72 per cent over the seventy years of period. It is, however, noted that if we ignore 1901 Census figure, the latest Censuses (1951, 1961 & 1971) show a generally slightly lower percentage of labour force in primary sector than the earlier (1911, 1921 & 1931) Censuses.

The proportion of working force engaged in industries experienced a steady decline during 1901-1931. This probably

Table 5.2 : Occupational Distribution of Working Force in India, 1901-71

Occupations	1901	1911	1921	1931	1951	1961	1971
<u>I. Primary (Agriculture) Sector</u>							
1. Cultivators	71.80	75.1	76.3	75.1	72.7	72.3	72.6
2. Agricultural Labourers	56.6	49.8	54.4	45.1	50.0	52.8	43.4
3. Livestock, Mining, Forestry, Fishery, Plantation	16.9	20.6	17.4	24.8	19.7	16.7	26.3
	4.3	4.7	4.5	5.2	3.2	2.8	2.9
<u>II. Secondary (Industry) Sector</u>							
1. Large and Small Scale Industries	12.5	10.9	10.2	9.9	10.1	11.7	10.7
2. Construction	11.7	9.9	9.3	8.9	9.0	10.6	9.5
	0.8	1.0	0.9	1.0	1.1	1.1	1.2
<u>III. Tertiary (Service) Sector</u>							
1. Trade and Commerce	15.7	14.0	13.5	15.0	17.2	16.0	16.7
2. Transport, Storage and Communication	6.1	5.5	5.7	5.6	5.2	4.0	5.6
3. Other Services	1.1	1.1	0.9	1.0	1.5	1.6	2.4
	8.5	7.4	6.9	8.4	10.5	10.4	8.7
Total (I+II+III)	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Sources : I) Indian Pocket Book of Economic Information, 1972, p.25.  
 II) Pocket Book of Population Statistics, 1972, p.3.

reflects the secular decline in the indigenous crafts and industry during the British regime. After 1931, this proportion has experienced a marginal increase from Census to Census. A significant and continuous change noted within the agricultural sector, has, however, been a decline in the proportion of cultivators and those engaged in livestock, forestry, mining etc., and increase in that of agricultural labourers.

### 5.3 Recent Trend in Structure of Labour Force in India and Uttar Pradesh

The proportion of workers engaged in agriculture in India was constant at 73 per cent in 1951, 1961 and 1971. The only visible change occurred in the percentage of cultivators which declined from 50 per cent to 43 per cent during the 1951-71 period, whereas that of agriculture labourers rose from 20 to 26 per cent. These changes in the proportion of the two groups during this period reflects the fact of increasing pressure of population on land rendering small cultivators to the status of landless/ agricultural labourers. A decline in the proportion of agricultural labourers and increase in that of cultivators

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<sup>5</sup>Cf. D.R. Gadgil, 'The Industrial Evolution of India', p.34.



in 1961 is ascribed due to the definition and procedure of classification of workers adopted in 1961 Census.<sup>6</sup>

Proportion of workers in the secondary sector has shown a rising tendency, though of a very marginal nature. The tertiary sector has shown a higher proportion in the recent decades (1951-71) than in the earlier decades, but it has not shown any significant tendency to acquire larger share over the period of the three decades.

In Uttar Pradesh, the predominance of the primary sector is more than in India, around 75 per cent of labour force is in this sector, and there has been hardly any consistent change in this proportion during the recent decades. The 1971 Census, of course registered a higher proportion of labour force in this sector, than 1961, but part of it was due to the definitional change. Provisional estimates for 1981, however, suggest a marginal decline over 1961, from 76 per cent to 74 per cent. Proportion of

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<sup>6</sup> According to the Census Commissioner, the participation rate in cultivation at the 1961 Census got inflated due to two reasons : i) where there was no indication of economic activity, cultivation was treated as the main activity. This introduced a definite bias in favour of persons being as categorised as cultivators. ii) There was much talk of land reforms during the Second Five Year Plan period. Several agricultural labourers were allured to declare themselves as cultivators of land rather than as agricultural labourers with the hope of establishing a right as cultivators'. (Census of India, 1971, Paper I of 1971 - Supplement, p.34).

cultivators has, however, registered a decline, and that of agricultural labourers an increase over the last three decades.

Secondary sector is less important in U.P. than India, with only around 8 per cent of labour force engaged in it, almost equally divided between the household and non-household industries. Hardly any change seems to be taking place in the proportion of work force in this sector over the recent decades. Tertiary sector, however, seems to have gained in relative sense, according to the provisional figures, in 1981.\*

#### 5.4 Occupational Structure of the Working Force in the Kumaon Region

The distribution of the working population into different occupations is governed by the specific characteristics of the particular economy. For this reason, significant diversities are noticed in the occupational structure of different states and regions in a large country like India. Even a single but large state like Uttar Pradesh reveals diversities

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\* Discussion in these two para is based on the figures in Table 5.3 and estimates arrived at on the basis of provisional figures for 1981, given in Appendix VI with some adjustments.

of similar nature among its different sub-regions. The Kumaon region, generally characterised as one of the backward pockets of the state, has also some peculiar characteristics which distinguish it from other regions of the State in terms of economic base and structure and consequently in terms of occupational structure. The hilly terrain of the region's economy poses serious limitation on the development of manufacturing activities, but even a highly developed agriculture also appears difficult if not impossible due to its topographical characteristics. These constraints lend certain particularities to the structure of the working population in this region of the State.

We have attempted here an analysis of occupational distribution of labour force in the region into the three major sectors and major changes in them, on the basis of data 1961 and 1971 Censuses and to the extent possible of the provisional figures of the 1981 Census (Appendix VI). The occupational structure of the labour force has also been examined by some of its important components such as male-female, rural-urban composition.

The distribution of total labour force into different occupations is presented for each of the districts as well

for the whole region in Table 5.3, wherein the comparable figures of the State are also given. Obviously, the occupational structure of the Kumaon region is more heavily loaded in favour of primary sector, than of the State, with more than 78 per cent of it engaged in agriculture and other allied activities. Particularly noticeable is the much lower proportion of the secondary sector in Kumaon than the State as a whole, which itself is at a low level of industrial development. What is more important to note is that the two wholly hilly districts of the region, Almora and Pithoragarh have almost negligible proportion of their work force in industry. The percentage of labour force in industry is as low as 2.4 for the former, and 3.52 for the latter district as against, 5.15 of the region and 7.91 of the State as a whole in 1971.

Significantly, the region experienced a decline of about 5 per cent in the proportion of workers engaged in primary sector during 1961-71 from 83 to 78 per cent. In U.P. as a whole, the relevant proportion increased from 76 per cent to 78 per cent over 1961-71. In 1981, however, it seems to have declined to 74 per cent further drastically to 72 per cent in 1981. As in the State, the share of agricultural labourers considerably increased



OF  
Table 5.3 : Occupational Distribution/Working Population in  
Kumaon Region and Uttar Pradesh 1961-1971

Occupations	Almora		Pithoragarh		Nainital		Kumaon		Uttar Pradesh	
	1961	1971	1961	1971	1961	1971	1961	1971	1961	1971
<b>I. Primary (Agriculture) Sector</b>										
1. Cultivators	91.15	85.15	88.78	82.76	69.38	68.92	83.24	78.47	75.77	78.15
2. Agricultural Labourers	89.38	82.44	87.35	80.87	49.62	45.56	75.38	74.82	63.88	57.51
3. Mining, Quarrying, Livestock, Fishery, Forestry, Hunting, Plantation, Orchards, Allied Activities	0.62	1.70	0.78	1.18	11.46	18.45	4.36	8.00	11.30	19.98
<b>II. Industry (Secondary) Sector</b>										
1. Manufacturing Household	1.15	1.01	0.65	0.71	8.30	4.91	3.50	2.45	0.59	0.66
2. Manufacturing other than Household	2.93	2.41	5.27	3.52	12.10	9.00	6.53	5.15	9.76	7.91
3. Construction	1.82	1.12	3.50	1.94	5.82	2.05	3.52	1.64	6.24	3.67
<b>III. Tertiary (Services) Sector</b>										
1. Trade and Commerce	0.31	0.77	0.21	0.65	2.82	5.14	1.15	2.42	2.78	3.63
2. Transport, Storage & Communications	0.80	0.52	1.56	0.93	3.46	1.81	1.86	1.09	0.74	0.61
3. Other Services	5.92	12.44	5.95	13.72	18.52	22.08	10.23	16.38	14.47	13.94
<b>Total (I+II+III)</b>	0.85	1.78	0.79	1.56	3.78	6.34	1.84	3.49	3.68	3.92
	0.37	0.69	0.29	0.54	2.21	3.60	0.98	1.78	1.38	1.73
	4.69	9.97	4.87	11.62	12.53	12.16	7.40	11.11	9.41	8.29
	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Sources : i) Computed from Census of India, Series 21, Uttar Pradesh, B-III, pp.302-305.  
 ii) Computed from Census of India, Series, 21, Uttar Pradesh, Part II-B(ii), General Economic Tables, pp.100-103.

from 4 per cent to 8 per cent in the Kumaon. It has continued to decline further during 1971-81, the provisional estimates for 1981 being 10 per cent. The corresponding percentages based on the provisional figures of the 1981 Census reveal a decline from 20 to 16 per cent for Uttar Pradesh.

The past experience suggests that there has decidedly been a dispossession of tenurial rights and tenants have been reduced to the status of share croppers and agricultural labourers. It may, however, be noted that the State of U.P. and the Kumaon region in particular stand lower than the country as a whole in regard with the respective figures of the proportion of agricultural labourers to total population. In 1971 these proportions were 26 per cent, 19 per cent and 8 per cent in India, Uttar Pradesh and Kumaon region respectively.

Strangely enough, the proportion of workers engaged in secondary sector experienced a decline from 6 per cent in 1961 to 5 per cent in 1971 in the Kumaon region and from 10 per cent to 8 per cent in U.P. The non-household manufacturing sector has expanded absolutely and relatively, but the growth of this sector has been more than offset by a decline in household sector so as to result in the overall decline. The decline in workers in household

sector in 1971 is, of course, partly due to the reasons of definition of worker adopted in the 1971 Census. But the provisional figures of 1981 Census also indicate a decline in the proportion of household industry workers, over 1961, though they are higher than the 1971 Census given below.

Table 5.4 : Percentage of Workers in Household Industries in the Kumaon Region

Censuses	Kumaon Region	Uttar Pradesh
1961	3.52	6.24
1971	1.64	3.67
1981	2.68	4.39

Sources : 1) Ibid.

ii) Census of India, 1981, Series 22, Uttar Pradesh, Paper 1 of 1981, Supplement, Provisional Population Totals, pp.122-123.

A significant distinguishing feature of the occupational structure of Kumaon region is to be found in a relatively high proportion of its work force in the tertiary sector as compared to U.P., and also an increase in this proportion during 1961-71 as against a marginal decline in the case of U.P. Further, Almora and Pithoragarh

witnessed an increase in the proportion of workers engaged in all sub-sectors of the tertiary sector, but increase in the amorphous sub-sector 'other services' was exceptionally high. In the case of Nainital, where tertiary sector employment is high and has increased from 18 to 22 per cent during 1961-71, the proportion of other services declined marginally from 12.53 per cent to 12.13 per cent while the remaining two sub-groups witnessed a considerable upsurge during the same period. During 1971-81, tertiary sector appears to have gained further, as the estimates of proportion of labour force in this sector in Kumaon region turn out to be around 22 per cent, as against 16 per cent in 1971. In U.P. the increase during the same period has been from 14 to 17 per cent.

It is evident that after agriculture the biggest purveyor of employment in the region is the 'other services'. In the case of hill districts, Almora and Pithoragarh, this sector is an euphemism for government jobs and positions in State owned or aided institutions, and constitutes most of the tertiary sector.<sup>7</sup> In Nainital, the existence

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<sup>7</sup>Tewari, G.C. (1982), 'An Economic Profile of the Hill Region of Uttar Pradesh', Govind Ballabh Pant Social Institute, Allahabad, Occassional Paper No.10, p.27.



of a considerable network of private enterprise in the service sector leads to sizeable contribution of the other components of tertiary sectors as well. Trade and commerce as an economic pursuit in the hill districts of Almora and Pithoragarh have barely a notional existence like that of the industrial sector. This is mainly due to the low production base and also the problem of accessibility due to the undulating and precarious topography of these two districts. In Nainital, a relatively developed and semi-hilly district, this sector alone provides about 6 per cent of the total employment; and, another 4 per cent employment is generated in transportation and communication sector.

#### 5.4.1 Occupational Structure by Sex

Occupational distribution of the male-female components in the Kumaon region is presented in Table 5.5. It is evident that the females are primarily concentrated in primary sector and especially in cultivation. 96 per cent females are engaged in primary sector, about 92 per cent females are engaged in primary sector, about 92 per cent of them in cultivation alone. The corresponding percentages for Uttar Pradesh are 87 per cent and 42 per cent.

Strikingly, only 1 per cent and 3 per cent female workers in Kumaon are, thus, employed in the secondary and the tertiary sectors respectively. This obviously reflects the lack of non-agricultural activities in general and those suited for women participation in particular, on the one hand, and the attested reality of drudgery for women in the region, on the other. This is, however, not equally true in the case of Nainital. The proportion of females engaged in primary sector as also in cultivation is substantially lower in Nainital as compared to Almora and Pithoragarh. Consequently their proportion is higher in the secondary and the tertiary sectors, in comparison to Almora and Pithoragarh. In tertiary sector, it is higher than the State average as well.

Agriculture being the main occupation, obviously the majority of male workers are also found in the primary sector but their concentration in that sector is not as overwhelming as of female workers. In Almora and Pithoragarh three-fourths but in Nainital only two-thirds of the male workforce is to be found in the primary sector. With the existence of a network of manufacturing sector as also of trade, commerce, transportation etc., in Nainital district, a sizeable proportion of workers mainly males is flushed-out from agriculture to these non-agricultural activities.

Table 5.5 : Occupational Distribution of Working Population in the Kumaon Region and Uttar Pradesh by Sex, 1961-71

Occupations	Almora						Pithoragarh						Nainital																							
	1961			1971			1961			1971			1961			1971																				
	M	F	2	M	F	3	M	F	4	M	F	5	M	F	6	M	F	7	M	F	8	M	F	9	M	F	10	M	F	11	M	F	12	M	F	13
	1																																			
I. Primary (Agr.) Sector	82.00	98.67	76.34	98.45	79.30	96.67	74.35	96.70	63.98	87.17	66.83	87.32																								
1. Cultivators	78.70	98.12	72.89	96.85	77.07	95.89	71.91	95.70	41.32	76.99	43.75	61.46																								
2. Agricultural Labourers	0.73	0.53	1.91	1.38	0.90	0.68	1.31	0.97	12.86	6.82	18.03	22.09																								
3. Mining, Quarrying, Live-stock, Fishery, Forestry, Hunting, Plantations, Orchards & Allied Activities	2.57	0.02	1.54	0.22	1.33	0.10	1.12	0.03	9.80	3.36	5.05	3.77																								
II. Secondary (Industry) Sector	5.49	0.84	3.75	0.39	8.22	2.82	4.30	2.22	13.47	7.59	9.75	2.45																								
1. Household Manufacturing	3.03	0.83	1.63	0.35	4.36	2.79	2.17	1.56	5.55	6.73	2.13	1.32																								
2. Manufacturing other than Household	0.68	0.01	1.26	0.03	0.42	0.03	0.65	0.65	0.03	0.63	5.83	0.92																								
3. Construction	1.78	0.00	0.86	0.01	3.43	0.00	1.48	0.01	4.43	0.23	1.99	0.21																								
III. Tertiary (Service) sector	12.51	0.50	19.91	1.16	12.48	0.51	21.35	1.08	22.55	5.24	23.42	10.23																								
1. Trade & Commerce	1.86	0.01	2.92	0.07	1.70	0.03	2.49	0.02	4.80	0.43	6.98	0.75																								
2. Transport, Storage and Communications	0.83	0.00	1.14	0.02	0.64	-	0.86	0.00	2.87	0.06	3.97	0.39																								
3. Other Services	9.82	0.49	15.85	1.07	10.14	0.48	18.00	1.06	14.88	4.75	12.46	9.09																								
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Contd..../-



	Kumaon Region						Uttar Pradesh					
	1961			1971			1961			1971		
	M	F	M	F	M	F	M	F	M	F	M	F
	14	15	16	17	18	19	20	21	21	21	21	21
<b>I. Primary (Agriculture) Sector</b>												
1. Cultivators	73.12	96.10	71.46	96.44	73.33	84.40	77.11	87.36				
2. Agricultural Labourers	60.90	93.76	58.81	91.62	63.62	64.78	59.22	42.50				
3. Mining, Quarrying, Livestock, Fishery, Forestry, Hunting, Plantation, Orchards & Allied Activities	6.45	1.70	9.51	4.16	9.05	19.24	17.22	44.34				
	5.77	0.63	3.14	0.66	0.67	0.38	0.67	0.52				
	9.67	2.54	6.71	1.16	10.23	8.11	8.23	5.04				
	4.42	2.37	1.96	0.81	5.87	7.58	3.64	3.91				
<b>II. Secondary (Industry) Sector</b>												
1. Household Manufacturing	1.96	0.12	3.24	0.32	3.43	0.47	3.92	1.03				
2. Manufacturing other than Household	3.29	0.05	1.51	0.03	0.93	0.06	0.67	0.10				
3. Construction	17.21	1.36	21.83	2.40	16.44	7.49	14.66	7.60				
<b>III. Tertiary (Service) Sector</b>												
1. Trade & Commerce	3.21	0.09	4.79	0.15	4.43	1.04	4.23	1.21				
2. Transport, Storage and Communications	1.75	0.01	2.44	0.07	1.76	0.04	1.91	0.19				
3. Other Services	12.25	1.26	14.60	2.18	10.25	6.41	8.52	6.20				
<b>Total</b>	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00				

Sources : 1) Computed from Census of India, 1961, Series 21, Uttar Pradesh, B-III, pp.302-305.

11) Computed from Census of India, 1971, Series 21, Uttar Pradesh, Part II-B(11), General Economic Tables, pp.100-103.



#### 5.4.2 Occupational Structure by Rural-Urban Composition

The heavy concentration of workers in rural areas as is found in Kumaon economy is, no doubt, a natural phenomenon. But what is particularly perplexing is the low industrial base even of the urban areas. True, this phenomenon is a characteristic of the state as a whole to a large extent, where only 28 per cent of the urban work force is found in the secondary sector and as much as 61 per cent in tertiary sector (Table 5.6). But the tendency is more marked in the case of Kumaon region where the secondary sector absorbing 19 per cent of the urban work force and tertiary sector almost 70 per cent. In the wholly hilly districts of Almora and Pithoragarh, the secondary sector workers constituted (1971) only 10 and 11 per cent, and tertiary sector workers as high as 86 per cent and 79 per cent respectively of the urban workforce. In Nainital the work force distribution in urban areas seems to suggest a somewhat better productive base of its towns, as 23 per cent of the urban work force in this district is in industrial sector.

#### 5.5 Changes in the Occupational Structure of Labour Force in the Kumaon Region

The previous analysis reveals no fundamental change in the occupational structure of Kumaon region during

Table 5.6 : Occupational Structure of the Working Population in the Kumaon Region and Uttar Pradesh by Rural-Urban Distribution, 1961-71

1	Almora					Pithoragarh					Nainital				
	1961		1971			1961		1971			1961		1971		
	Rural	Urban	Rural	Urban		Rural	Urban	Rural	Urban		Rural	Urban	Rural	Urban	
	2	3	4	5		6	7	8	9		10	11	12	13	
<b>I. Primary (Agr.) Sector</b>	93.56	6.42	89.15	4.67		88.78		83.45	9.14		79.31	6.65	82.46	12.37	
1. Cultivators	91.81	3.75	86.38	2.98		87.34	-	81.36	8.60		56.90	3.65	55.42	4.34	
2. Agricultural Labourers	0.64	-	1.73	1.12		0.78	-	1.31	0.14		13.17	0.60	21.27	6.66	
3. Mining, Quarrying, Live-stock, Fishery, Forestry, Hunting, Plantations, Orchards and Allied Activities	1.11	2.67	1.04	0.57		0.66	-	0.78	0.40		9.24	2.39	5.76	1.37	
<b>II. Secondary (Industry) Sector</b>	2.72	10.66	2.06	9.56		5.27	-	3.58	11.38		10.27	23.71	5.75	22.61	
1. Household Manufacturing	1.80	2.61	1.07	2.05		3.50	-	2.08	2.69		5.14	10.12	1.53	4.21	
2. Manufacturing other than Household	0.15	5.78	0.49	6.42		0.21	-	0.61	4.04		1.89	8.73	3.13	13.57	
3. Construction	0.77	2.27	0.50	1.08		1.56	-	0.89	4.65		3.24	4.86	1.09	4.83	
<b>III. Tertiary (Service) Sector</b>	3.72	82.92	8.79	85.77		5.94	-	12.97	79.47		10.42	69.64	11.79	65.02	
1. Trade & Commerce	0.56	10.90	1.15	14.59		0.79	-	1.22	18.21		1.60	17.57	2.54	22.24	
2. Transport Storage and Communication	0.26	4.04	0.46	5.47		0.29	-	0.47	4.36		0.96	10.12	1.25	13.45	
3. Other Services	2.90	67.98	7.18	65.71		4.86	-	11.28	56.90		7.86	41.95	8.00	29.33	
<b>Total</b>	100.00	100.00	100.00	100.00		100.00	100.00	100.00	100.00		100.00	100.00	100.00	100.00	

	Kumaon Region						Uttar Pradesh			
	1961			1971			1961			
	Rural	Urban		Rural	Urban		Rural	Urban	Rural	Urban
	14	15	16	17	18	19	20	21		
<b>I. Primary (Agriculture) Sector</b>	80.78	6.60	85.68	10.66	83.53	7.33	87.71	10.53		
1. Cultivators	73.28	3.67	74.60	4.28	70.52	5.09	64.88	5.48		
2. Agricultural Labourers	4.22	0.47	8.45	5.22	12.46	1.16	22.21	4.16		
3. Mining, Quarrying, Livestock, Fishery, Forestry, Hunting, Plantations, Orchards and Allied Activities	3.28	2.46	2.63	1.16	0.54	1.08	0.62	0.89		
	5.15	20.91	3.65	19.41	7.41	30.55	4.94	28.41		
<b>II. Secondary (Industry) Sector</b>	2.94	8.51	1.43	3.70	5.85	9.72	3.10	7.58		
1. Household Manufacturing	0.71	8.10	1.43	11.64	10.90	17.65	1.48	18.47		
2. Manufacturing other than Household	1.50	4.30	0.79	4.07	0.46	3.18	0.36	2.36		
3. Construction	14.07	72.49	10.67	69.93	9.06	62.12	7.35	61.06		
<b>III. Tertiary (Service) Sector</b>	0.86	16.14	1.65	20.50	1.96	18.92	1.76	20.34		
1. Trade and Commerce	0.45	8.81	0.73	11.38	0.57	8.58	0.48	10.41		
2. Transport Storage & Communication	12.76	47.54	8.29	38.05	6.54	34.62	5.10	30.31		
3. Other Services										
<b>Total</b>	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00		

Sources : i) Computed from Census of India, 1961, Series 21, Uttar Pradesh, B-III, pp.302-305.

ii) Computed from Census of India, 1971, Series, Uttar Pradesh, Part II-B(11), General Economic Tables, pp.100-103.



1961-81, though this may be a rather short period for expecting a transformation of the economy. The new population is being distributed among the available occupations mostly according to the old pattern. None-the-less, even in the short period covered, some important trends indicating emerging structural shifts in labour force are visible. First, in the Kumaon region as well as in each of its three districts, occupational distribution has been shifting away from agriculture. The proportion of work force engaged in agriculture in the Kumaon region as a whole declined from 83 per cent in 1961 to 78 per cent in 1971 and 72 per cent in 1981. A decline of 11 percentage points, in the situation of fast growing labour force, in a period of twenty years could be considered more than significant on a comparable standards. In this regard, an almost equal increase in the tertiary employment well tends to confirm the above shift. Thus, within the agriculture labour force, the proportion of cultivators has been declining and that of agricultural labourers rapidly increasing. Second, despite this shift, pressure of population on land has relentlessly increased rendering an increasing number of cultivators to the status of landless cultivators. Third, there has been a tremendous expansion in the tertiary sector and fast rise in its share in employment. This expansion primarily consists of



induction of a large number of government offices and other public institutions in the region, directly or indirectly aiding development. Their impact, however, does not seem significant, as is indicated by a very low proportion of labour force in secondary sector growing at a snail's pace. Thus a rise in the proportion of tertiary sector in labour force from 10 to 22 per cent during 1961-81 is certainly spectacular, but its meaningfulness could be established, not by its more expansion, but by its impact on the commodity producing sector, namely, agriculture and industry.

## Chapter VI

### EMPLOYMENT IN AGRICULTURE : GROWTH AND POSSIBILITIES

Agriculture is the main stay of the population in the Kumaon region even more than in the country and the state of Uttar Pradesh and could, therefore, be expected to be the catalyst in the economic development of the region. However, despite being the pre-dominant base of the regional economy, agriculture is not able to play the expected pivotal role. In fact, given the uneven terrain and precarious topography, a highly developed agriculture is hardly a feasible proposition in the hilly region.<sup>1</sup> In short, agriculture in this region is beset by a number of innate constraints of its own kind such as tiny and scattered landholdings, poor and porous soil, unfossiliferous land slates, dearth of irrigation facilities and very stern and niggardly nature of topography which withhold the extension and development of agriculture. No doubt, tarai and bhabar areas of Nainital district are decidedly an exception and constitute agriculturally one of the most developed regions not only in Uttar Pradesh but also

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<sup>1</sup> Report of the Seminar on Development of Hill Areas,  
Giri Institute of Development Studies, Lucknow,  
held at Nainital on 21-24 April, 1980, p.3.

in the country. In the case of hilly region, there are severe constraints on raising production and effective employment in agriculture. Any extension in the margin of cultivation, if at all possible, is an increasingly costlier and less economical proposition, on the one hand, and poses problems of ecological nature, on the other. Efforts to raise yield and productivity per unit of cultivated land are also seriously handicapped due to difficulties and infeasibility of applying newer technology.

No doubt, agriculture in the hill region tends to be labour intensive in view of the non-applicability of labour replacing technology, but such employment is certainly less effective in productivity and income terms than in the plains. We make an attempt in this chapter to examine the growth and structure of agriculture in the region with a view to assessing the capacity of this sector to absorb labour productively.

#### 6.1 Employment in Agriculture

Agriculture is the biggest purveyor of employment in the Kumaon region as about three-fourths of total workers are employed in agriculture alone. In the wholly hilly districts, viz., Almora and Pithoragarh, a still higher proportion of workers are employed in agriculture and in the

Table 6.1 : Percentage of Labour Force Employed in Agriculture/Total Labour Force  
in the Kumaon Region and Uttar Pradesh, 1961-81

		1961			1971			1981*		
		Total	Culti- vators	Agricultu- ral Labourers	Total	Culti- vators	Agricultu- ral Labourers	Total	Culti- vators	Agricultu- ral Labour- ers
Almora	P	90.24	89.62	0.62	84.14	82.44	1.70	77.01	75.19	1.82
	M	35.85	35.52	0.33	45.00	43.85	1.15	37.89	36.75	1.14
	F	54.39	54.10	0.29	39.14	38.59	0.55	39.12	38.44	0.68
Pithoragarh	P	88.13	87.35	0.78	80.82	79.54	1.28	83.03	82.25	0.78
	M	35.41	35.00	0.41	41.47	40.58	0.89	40.09	39.52	0.57
	F	52.72	52.35	0.37	39.35	38.96	0.39	42.94	42.73	0.21
Nainital	P	61.08	49.62	11.46	64.01	45.56	19.45	63.76	45.03	18.73
	M	41.57	31.70	9.87	55.47	39.28	16.19	53.96	37.62	16.34
	F	19.51	17.92	1.59	8.54	6.28	2.26	9.80	7.41	2.39
Kumaon Region	P	79.84	75.47	4.37	75.71	67.58	8.13	72.20	62.67	9.53
	M	37.72	34.11	3.61	48.41	41.47	6.94	45.97	37.81	8.16
	F	42.12	41.36	0.76	27.30	26.11	1.19	26.23	24.86	1.37
Uttar Pradesh	P	75.18	63.88	11.30	77.38	57.43	19.95	74.33	58.01	16.32
	M	56.62	49.57	17.05	68.54	53.10	15.44	66.53	53.51	13.02
	F	18.56	14.31	4.25	8.84	4.33	4.51	7.80	4.50	3.30

\* Percentages for the 1981 Census are based on 'Provisional Figures' and Comprise only 'Main Workers'.

Sources: i) Computed from Census of India, 1961, Series 21, Uttar Pradesh, B-III, pp.302-305.

ii) Computed from Census of India, 1971, Series 21, Uttar Pradesh, Part II-B(ii), General Economic Tables, pp.100-103.

iii) Computed from Census of India, 1981, Series 22, Uttar Pradesh, Paper 1 of 1981 Supplement, Provisional Population Totals, pp.226-27.



semi-hill district Nainital nearly two-thirds of total workers are engaged in this sector.

A special feature of agriculture employment in Kumaon region, particularly in the hilly parts, is an overwhelmingly preponderance of cultivators, and a relatively small proportion of agricultural labourers among the agricultural workers. Barely 8 per cent of agricultural labourers to the total employment in agriculture in the Kumaon region is very low as compared with the State average of 20 per cent (1971). The situation, however, stands in contrast in Nainital district where agriculture labourers constitute a larger proportion than at the State level. A relatively large average size of land holdings, and non-availability of exchange labour in the plain areas of Nainital district account for a high proportion of employment of hired agricultural labourer in the district.

Although, as we have seen in the preceding chapter, the proportion of workers in agricultural sector has been declining in the region during the last few decades, the absolute number of workers in the sector have been on an increase leading to an increasing pressure on limited land. Here we aim at examining as to what extent this mass of workers is productively employed in agriculture and what

are the possibilities of further absorption of labour in this sector.

## 6.2 Determinants of Labour Absorption Capacity of Agriculture

The factors determining labour absorption in agriculture are many and their inter-relations are complicated. The size distribution of land-holding is one of the important factors which directly and indirectly determine the labour use capacity of agriculture. In fact, the application of agricultural practices and techniques to a large extent, is also determined by landholding size itself. In brief, the larger the landholding size, the more is the labour absorption and vice versa. Cropping pattern has also its own contribution in determining labour use in agriculture. It is seen that the cultivation of high value crops requires more labour input as compared to the coarse millet food-grains.

Available evidences suggest that the intensive use of land i.e. cropping intensity is one of the most important factors determining employment in agriculture.<sup>2</sup> An increasing

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<sup>2</sup> 'With the intensity of cropping raising from 100 to 400 per cent, the employment requires would rise from 85 to 432 mandays per hectare and production in terms of foodgrains would increase from 5 to 14 tonnes per hectare'. (Recent Research in Multiple Cropping', by Indian Agricultural Research Institute, New Delhi, 1972, pp.115-121).

cropping intensity means an increase in employment and output. Cropping intensity is, to a large extent, a dependent variable of irrigation that is a vital factor for agricultural development. The different irrigation technologies can have quite different potential for labour absorption. For example, hand tubewells are usually far more labour using than power pumps. Irrigation facilitates the application of multiple cropping, chemical fertilizers and high yielding varieties. It is believed that much more work needs to be done following the application of HYV as compared to the traditional varieties.<sup>3</sup> So far as the role of mechanisation (particularly tractors) in determining labour absorption in agriculture is concerned, it leads to reduction in direct employment. Keeping in view these facts, now we examine the extent of these factors in the Kumaon agriculture, with a view to assessing their role in growth of output and productivity, which ultimately determine the income and employment levels.<sup>4</sup>

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<sup>3</sup>Alagh, Y., et.al. in 'Labour Absorption in Indian Agriculture : Some Exploratory Investigations', ARTEP, Bangkok, 1978, report that there is reason to believe that the new technology will increase the labour force and possibly will raise the elasticity of output to employment to 0.5. This is to say, for every 1 per cent increase in agricultural productivity, it is expected that the labour force will increase by  $\frac{1}{2}$  per cent. Also see, 'Employment Expansion in Asian Agriculture : A Comparative Analysis of South Asian Countries', ILO, Bangkok, 1980, p.254.

<sup>4</sup>Ibid.

### 6.2.1 Land-holding Size

The small size of individual holding is a characteristic of agriculture in most parts of India. But the Kumaon region seems specially plagued by this phenomenon. Over three-fourths of the holdings in this region are of less than one hectare and around 60 per cent of less than 0.5 hectare (1976-77) (Table 6.2). Holdings above 2 hectares constitute only 11 per cent of the total. Another alarming feature to note is of a very sharp increase in the proportion of holdings of less than 0.5 acres; proportion of such holdings have increased from 40 per cent to 59 per cent during a short period, 1970-71 - 1976-77. Within the region the pattern of Nainital stands in contrast with the other two districts. While about 85 per cent of holdings fall in the size group less than one hectare group in Almora and Pithoragarh, the corresponding percentage for Nainital is only 50. And in the latter about 15 per cent of holdings fall in the size group 4 hectares and above, as against less than 0.5 per cent in the other two districts and 5 per cent in U.P.

### 6.2.2 Land/Man Ratio

As mentioned earlier, availability of land per worker is an important determinant of employment in agriculture.



Table 6.2 : Percentage Distribution of Landholdings  
in Kumaon and Uttar Pradesh, 1970-71 &  
1976-77

Size Class (in hectares)	Years	Almora	Pithora- garh	Nainital	Kumaon	Uttar Pradesh
Below 0.5	1970-71	47.5	46.4	23.8	39.9	46.7
	1976-77	65.6	66.5	34.4	58.5	49.7
0.5 - 1.0	1970-71	29.7	30.8	17.8	26.3	20.1
	1976-77	19.4	17.8	14.8	17.8	19.5
1.0 - 2.0	1970-71	17.4	16.9	20.9	18.4	17.2
	1976-77	11.3	11.3	17.3	12.7	16.5
2.0 - 3.0	1970-71	3.7	4.1	13.1	6.7	7.1
	1976-77	2.4	2.8	11.4	4.7	6.5
3.0 - 4.0	1970-71	0.8	1.0	8.1	3.1	3.5
	1976-77	0.6	0.9	7.2	2.3	3.1
4.0 - 5.0	1970-71	0.3	0.4	5.0	1.8	1.9
	1976-77	0.2	0.3	5.0	1.4	1.8
5.0 & Above	1970-71	0.3	0.4	11.3	3.7	3.5
	1976-77	0.2	0.4	9.9	2.6	2.9
Total	1970-71	100.00	100.00	100.00	100.00	100.00
	1976-77	100.00	100.00	100.00	100.00	100.00

Source : Agricultural Census in Uttar Pradesh, 1970-71 and 1976-77, Board of Revenue, Uttar Pradesh, Lucknow.

The number of workers per hectare has been relatively high and is also increasing at a relatively fast rate over the period (Table 6.3). This is despite the fact that there

Table 6.3 : Agricultural Workers Per Hectare of Cultivated Land in Kumaon and U.P.

	1970-71	1980-81*
Almora	3.104	2.796
Pithoragarh	1.874	2.670
Nainital	0.870	1.598
Kumaon Region	1.575	2.143
Uttar Pradesh	1.226	1.567

\* In 1980-81, workers refer to total workers, i.e., main workers plus marginal workers.

has been a substantive increase in net cultivated area during 1971-81, particularly in Almora district where there has been an increase in land per worker. In 1981, there were 2.14 workers per hectare in Kumaon as compared to 1.57 in Uttar Pradesh. The situation is particularly unfavourable in the entirely hilly districts of Almora and Pithoragarh where there were 2.8 and 2.7 workers per hectare respectively in 1981.

Since the Census figures on which the above derivations are based reflect the stock of manpower engaged in agriculture irrespective of the time and intensity of their work, higher man-land ratio mainly reflects dependency and

absorption rather than necessarily the effective employment. According to an exercise based on our sample survey in Pithoragarh district, reported subsequently, the maximum output per unit of land was found to have been obtained with 0.71 workers per acre, (or 1.75 workers per hectare). If this figure is taken to represent some kind of an optimum for the hilly region, it is evident that a sizeable part of agricultural labour force in Almora and Pithoragarh is not effectively employed, but simply 'absorbed' in agriculture. This obviously implies that the agriculture in the hill region, in its present set up, is not likely to provide effective employment to any additional labour force. A change in organisation, technology and cropping pattern may, however, lead to a higher level of production and may increase employment potential.

#### 6.2.3 Cropping Pattern

The subsistence character of agriculture is a universal phenomenon in India and U.P. Its predominance is overwhelming in Kumaon hills due both to the preponderance of tiny holdings and lack of exposure to the market. That is why we find that over 95 per cent of the land in Almora and Pithoragarh districts, is used for the growing of foodgrains, particularly cereals. The percentage is smaller (80) in

**Table 6.4 :** Percentage Distribution of Area Under Major Crops in the Kumaon Region and Uttar Pradesh

Years	C E R E A L S				P U L S E S		C O M M E R C I A L		
	Paddy	Wheat	Maize	All	Masoor	All	Sugar- cane	Pota- toe	Other
Almora									
1974-75	22.61	38.88	1.56	96.60	0.26	0.51	0.01	1.92	2.89
1977-78	21.69	33.99	1.08	96.96	0.23	0.45	0.00	1.69	2.59
1980-81	20.53	34.27	1.30	97.22	0.87	1.12	-	0.50	1.65
Pithoragarh									
1974-75	29.81	37.54	3.36	98.44	0.12	0.23	-	0.87	1.33
1977-78	28.77	35.91	3.76	98.68	0.10	0.19	-	0.73	1.13
1980-81	26.54	32.89	3.52	89.64	4.10	4.67	0.16	0.76	5.68
Nainital									
1974-75	31.52	29.74	7.52	72.29	2.54	6.56	14.48	0.51	21.14
1977-78	34.46	33.47	5.32	76.71	2.19	5.39	13.09	0.47	17.90
1980-81	35.31	37.32	4.78	80.83	2.41	4.29	9.83	0.68	14.87
Kumaon Region									
1974-75	28.74	33.78	5.06	84.10	1.44	3.66	7.66	0.97	12.24
1977-78	29.67	34.12	3.79	87.02	1.20	2.91	6.66	0.88	10.07
1980-81	29.23	35.55	3.51	87.40	2.29	3.43	5.03	0.64	9.16
Uttar Pradesh									
1974-75	20.80	28.92	6.47	72.88	0.99	14.80	7.01	0.96	12.31
1977-78	22.28	30.95	5.46	73.62	1.10	13.69	7.49	0.92	12.70
1980-81	21.11	32.38	4.88	70.22	1.10	11.42	5.44	1.06	18.36

Sources : Uttar Pradesh Ke Krishi Aakade (in Hindi), Directorate of Agriculture, Lucknow, 1977, December 1980 and January 1983 for 1974-75, 1977-78 and 1980-81 respectively.



Nainital, but still higher than in U.P. (70 per cent). Kumaon region as a whole has more than 87 per cent of total cropped area under foodgrain crops. Among commercial crops, sugarcane has a significant area, over 5 per cent, but all of it is claimed by plains part of Nainital district. Potato is another commercial crop, though with small, less than one per cent area under it almost similar in the three districts.

The overwhelmingly subsistence character of agriculture in the region is being further strengthened, by rapid rise in population, as is indicated by the fact that the proportion of area under cereals has steadily increased in the region. A decline in the percentage of area under cereals in Pithoragarh in 1980-81 over 1977-78, is of course noticed, where a shift in favour of pulses, especially masoor, and other miscellaneous crops, is observed. Commercial crops have lost in relative proportion of area in the Kumaon region as a whole, as well as in each districts over the period. An increase in area under pulses in Almora and Pithoragarh is however, an interesting feature to note.

Overall cropping pattern in the region does not seem experiencing any significant changes except the above minor

shifts. A decline in proportion of area under paddy and wheat in Almora and Pithoragarh and increase in Nainital is observed to some extent. This is primarily due to the declining proportion of irrigated area in the former two districts and the increasing proportion of irrigated area in the latter district (See Table 6.8).

With regard to the cropping pattern in our four sample villages, some salient features noticed during the investigation period are interesting to note. Paddy and mandua have been the chief Kharif crops and wheat and barley the principal Rabi crops. It was observed that paddy and wheat are sown in the maximum area under valley farming system (irrigated) while coarse millets like mandua and bajara in the upland farming system (unirrigated). In respect of Kharif crop, a distinguishing feature of cropping pattern has been that the whole Kharif crop area is divided into two divisions, as Pandey<sup>5</sup> also reports for 'Uttrakhand', namely, 'dhan sar' and 'mandua sar'. These areas run by rotation and thus every third year each sar comes under the same crop. The length of frost-free land earmarked for

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<sup>5</sup>Pandey, G.C. (1977), 'Uttrakhand Ki Artha Vyawastha', (in Hindi), Consul Publishers, Nainital, op. cit., p.78.

paddy has been about 3 to 4 months. Besides, mixed farming was also found in all the four villages. As regards method of sowing seeds, the broadcast method has been universal in all the villages. The cultivation of the feasible commercial crops such as potatoe, onion, mustard is, however, dismally low in the villages. The tiny size of land-holdings on the one hand and dearth of irrigation facilities on the other, appear the main inhibiting factors in this regard.

One sample village was found to be practising to a very limited extent, what is similar to the 'Jhuming Practice', or shifting cultivation.<sup>6</sup> It was noticed that coarse millets mainly bajra is cultivated in Jhuming areas and these areas are abandoned usually for one year. On account of such continued practice, the steep areas (ijrans) gradually tend to become terraced lands and then are used for settled cultivation. It is also important to

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<sup>6</sup> Basically, it consists of felling and burning a patch of forest, cultivating it two to three years and then abandoning it for some years to enable the forest to regenerate. With the increase in population the 'fallow period' becomes shorter and frequent clearing can result in the permanent destruction of the vegetation and its replacement by coarse valueless grasses'. Also see, Goswami, P.C., 'A Study on the Problems of Agricultural Development in the Hill Areas of N.E. India', (Ad-hoc study No.13), Agro-Economic Research Centre for N.E. India Jorhat-4, Assam, 1969, p.5.

note that no drought animal is used in shifting cultivation and the implements used are traditional and very simple. Availability of evidences<sup>7</sup> suggests that, in the past the 'Jhuming Practice' was to some extent in vogue in the Kumaon hills also, but now its existence virtually disappeared from the region.

#### 6.2.4 Cropping Intensity

The extent of employment and levels of productivity per unit of land depend, among other things, upon the intensity of land use. In the Kumaon region as a whole, the cropping intensity has been higher than the State average and has witnessed a steady increase as is indicated by figures in Table 6.5. It was 168.88 (1980-81) in the Kumaon region as a whole, Pithoragarh topped the list with the cropping intensity of 175.25 as against the State's average of 142.69 in the same year. The uniformly high intensity of cropping in all the districts especially in Almora and Pithoragarh of the region only reflects the fact that the limited cultivable land continued with the lack

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<sup>7</sup> Walton, E.G. (1928). 'Almora : A Gazetteer', Vol. XXXV, The Superintendent, Government Press, United Provinces, Allahabad.



of other sources of employment and income has led the people to eke-out as much as possible from that land through intensive cultivation.<sup>8</sup>

Table 6.5 : Cropping Intensity in the Kumaon Region and Uttar Pradesh, from 1974-75 to 1980-81

Years	Almora	Pithora- garh	Nainital	Kumaon	Uttar Pradesh
1974-75	164.48	157.98	157.23	159.46	132.79
1975-76	163.45	162.51	158.82	160.85	134.28
1976-77	164.44	159.74	157.49	160.00	133.25
1977-78	163.47	160.03	164.72	163.42	134.02
1978-79	164.33	177.26	164.89	167.00	139.01
1979-80	166.33	177.76	163.49	167.02	139.09
1980-81	166.30	175.25	168.11	168.88	142.69

Source : 'Uttar Pradesh Ke Krishi Aankade' (in Hindi) of the respective years, Directorate of Agriculture, Uttar Pradesh, Lucknow.

It is due to the intensive exploitation of cultivated land without use of inputs to replenish its declining

<sup>8</sup>Tewari, G.C. (1982), 'An Economic Profile of the Hill Region of Uttar Pradesh', Occasional Paper No.10, G.B. Pant Social Science Institute, Allahabad, p.28.

productive quantity combined with the operation of the Ricardian law of declining fertility of the marginal land, brought under cultivation, that in Almora and Pithoragarh per hectare yield has experienced a decline. But, the increasing cropping intensity in Nainital particularly in its plain portion is attributed to the expansion in area under irrigation (Table 6.8) and the consequent increasing applicability of high-yielding short duration varieties of crops. As a result, the per hectare yield has perceptibly increased in Nainital district (Table 6.10).

#### 6.2.5 Foodgrain Production and Productivity

The fact that agriculture in the hill region of Kumaon offers little scope for growth, in its present situation, to provide income and employment to increasing population, is evident from the fact that the production of foodgrains, which cover almost the entire agricultural production in the area, has either stagnated or registered a decline in Almora and Pithoragarh in the recent period. A steady and rapid increase in foodgrain production has, however, been experienced throughout the period in Nainital district, due to which the overall production in Kumaon has experienced an increase of around 50 per cent during

Table 6.6 : Foodgrain Production by Principal Crops in Kumaon Region and U.P.

Years	(In Metric Tonnes)							Total Foodgrains
	1	2	3	4	5	6	7	
								8
<b>Almora</b>								
1974-75		36064 (23.05)	N.A.	2325 (1.49)	65643 (41.96)	49222 (31.47)	1584 (1.03)	154838 (100.00)
1977-78		43417 (23.80)	38372 (21.03)	1748 (0.96)	66400 (36.40)	30904 (16.94)	1584 (0.87)	182425 (100.00)
1980-81		35265 (20.68)	36202 (21.23)	2234 (1.31)	64799 (37.99)	30476 (17.87)	1566 (0.92)	170542 (100.00)
<b>Pithoragarh</b>								
1974-75		33142 (27.64)	N.A.	4087 (3.41)	49501 (41.28)	32679 (27.25)	503 (0.42)	119912 (100.00)
1977-78		39165 (28.24)	25430 (18.34)	5437 (3.92)	49955 (36.03)	18168 (13.10)	503 (0.37)	138658 (100.00)
1980-81		29828 (24.14)	24055 (19.47)	4918 (3.98)	44609 (36.10)	15855 (12.83)	4299 (3.48)	123564 (100.00)
<b>Nainital</b>								
1974-75		124470 (42.72)	N.A.	24933 (8.56)	122377 (42.01)	9909 (3.40)	9634 (3.31)	291323 (100.00)
1977-78		219863 (49.01)	7640 (1.70)	24494 (5.46)	183361 (40.17)	4204 (0.94)	9017 (2.02)	448579 (100.00)
1980-81		261708 (48.38)	7874 (1.45)	27042 (5.00)	228477 (42.24)	5912 (1.09)	9934 (1.83)	450947 (100.00)

Contd..../-

	1	2	3	4	5	6	7	8
Kumaon	1974-75	193676 (34.21)	N.A.	31345 ( 5.54)	237521 (41.96)	91810 (16.22)	11721 ( 2.07)	566073 (100.00)
	1977-78	302445 (39.30)	71422 ( 9.28)	31679 ( 4.12)	299716 (38.94)	53276 ( 6.92)	11104 ( 1.44)	769642 (100.00)
	1980-81	326801 (39.13)	68131 ( 8.16)	34194 ( 4.09)	337885 (40.46)	52243 ( 6.26)	15799 ( 1.90)	835053 (100.00)
Uttar Pradesh	1974-75	3452774 (24.41)	N.A.	822876 ( 5.82)	7175588 (50.74)	506788 (3. 58)	2184887 (15.45)	14142913 (100.00)
	1977-78	5202512 (24.50)	168055 ( 0.79)	952145 ( 4.48)	9884365 (46.55)	2606894 (12.34)	2420892 (11.40)	21234863 (100.00)
	1980-81	5569411 (22.32)	164170 ( 0.66)	893911 ( 3.58)	13384977 (53.65)	2408983 ( 9.66)	2526430 (10.13)	24947882 (100.00)

Note : i) N.A. indicates 'Not Available'.

ii) Figures in parentheses denote percentage to total foodgrains.

Source : 'Uttar Pradesh Ke Krishi Aankade' (in Hindi) of the respective Years,  
Directorate of Agriculture, Uttar Pradesh, Lucknow.



1974-75 - 1980-81. A close look at the crop-wise food-grain production also exhibits the similarly different trends in the districts in respect of paddy, wheat, mandua and maize. However, the production of other cereals has declined in all the three districts of region.

The growth trends in production of all the crops in the Kumaon region as a whole primarily reflect the dominant position of Nainital district, and therefore, show a considerable increase. So far as a rapid and steady increase in foodgrain production in Nainital is concerned, the application of high-yielding seeds, among others, has been the most important factor for boosting production in the district.

The figures of average per hectare yield of some principal crops (Table 6.7) also confirm the observations regarding the differential trends between Nainital and the hilly districts of the region. Nainital has witnessed an increasing trend in its per hectare yield in all crops, while Almora and Pithoragarh have experienced a declining per hectare productivity during the later half of the seventies. These differences obviously <sup>reflect</sup> the differing degree of application of improved inputs and technology.<sup>9</sup>

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<sup>9</sup>Planning Department, Uttar Pradesh, 'Draft Annual Plan 1983-84', Vol.I, op. cit., p.196.

Table 6.7 : Per Hectare Yield of Principal Crops in Kumaon and Uttar Pradesh

(In Quintals)

Districts	Years	Paddy	Wheat	Maize	Mandua	Pulses	Sugarcane	Potatoes
Almora	1974-75	10.62	11.28	9.94	N.A.	20.76	182.50	34.33
	1977-78	11.71	11.43	9.48	9.64	20.76	182.50	34.33
	1980-81	9.32	10.26	9.30	8.34	7.55	-	156.61
Pithoragarh	1974-75	10.60	12.57	11.58	N.A.	20.70	185.00	34.33
	1977-78	10.87	11.11	11.55	11.18	20.78	185.00	34.33
	1980-81	9.15	11.04	11.37	11.34	7.49	264.57	156.61
	1974-75	13.81	14.39	11.59	N.A.	5.13	366.67	56.92
Nainital	1977-78	20.82	17.88	15.02	11.57	5.45	482.50	68.60
	1980-81	23.33	19.28	17.81	12.15	7.34	514.84	156.61
	1974-75	12.46	13.01	11.45	N.A.	5.93	366.63	40.63
Kumaon	1977-78	16.93	14.58	13.86	10.33	6.33	482.42	43.72
	1980-81	17.89	15.21	15.61	9.58	7.40	513.32	156.61
	1974-75	7.80	11.66	5.98	N.A.	6.94	412.19	104.43
Uttar Pradesh	1977-78	10.69	14.62	7.98	9.62	8.10	469.41	159.86
	1980-81	10.53	16.50	7.31	9.63	9.03	470.90	156.66

Note : N.A. denotes 'Not Available'.

Source : Ibid., Table 6.7.

Irrigation chemical fertilizers, improved seeds, land reclamation and soil conservation, mechanisation are the major items, the use of which could lead to rising productivity, not only in the fertile plains region, but also to a large extent in the undulating lands of the hilly region. A study<sup>10</sup> conducted by Govind Ballabh Pant University of Agriculture and Technology, Pantnagar (Nainital) in a typical sub-watershed, namely, Adbora, in the Ramganga watershed in Kumaon concluded that farm employment and income could be substantially increased by adopting improved farming system alongwith appropriate package of practices and inputs. In fact, agricultural technology generating and disseminating activities, thus, have the most critical role in bringing about output growth,

#### 6.2.6 Irrigation

The percentage of net area irrigated to net area cultivated is low (39 per cent) in Kumaon region and lags

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<sup>10</sup> Singh, Katar & Rahim, K.M.B., 'Identification and Education of Optimal Cropping System for a Typical Watershed in Uttar Pradesh Hills', Paper read at the Thirty-Eighth Annual Conference of the Indian Society of Agricultural Economics, Jorhat, January 18-20, 1979.

**Table 6.8 : Percentage of Net Area Irrigated to Net Area Cultivated by Different Sources in Kumaon and Uttar Pradesh, 1975-76 and 1980-81**

Districts	Years	Net Area Cultivated	Net Area Irrigated	%	Area Irrigated by Different Sources			
					Canals	Tubewells	Other Wells	Other Source
Almora	1975-76	110047	11437	10.39	2946	-	-	8491
	1980-81	113630	10890	9.58	2897	-	-	7993
Pithoragarh	1975-76	70753	6542	9.25	-	-	-	6542
	1980-81	70634	6191	8.76	512	-	-	5679
Nainital	1975-76	199631	92164	46.17	60784	28523	622	2235
	1980-81	204992	133805	65.27	72141	52788	2206	6670
Kumaon	1975-76	380431	110143	28.95	63730	28523	622	17268
	1980-81	389256	150886	38.76	75550	52788	2206	20342
Uttar Pradesh	1975-76	17201149	7933368	46.12	2743030	3188975	1314096	687267
	1980-81	17221367	9453038	54.89	3178250	5052521	746969	475298

Source : Ibid.



far behind the State average (55 per cent), despite the fact that the percentage in Nainital district is significantly higher, at 65 per cent, than the State average. The proportion of irrigated area in Almora and Pithoragarh is dismally low at 10 and 9 per cent respectively. A substantial increase in the proportion of irrigated area from 46 per cent to 65 per cent in Nainital district during 1976-81 is very encouraging, which has boosted the figure for kumaon as a whole to 39 per cent. But in the other two districts the already low proportion of irrigated area has further declined during the period.

It is true that the undulating topography of Almora and Pithoragarh, makes the construction of canals, the main feasible irrigation device, physically difficult and financially very costly. Most of the private irrigation works used traditionally, are found to be too old to use for the purpose because of want of repairs.<sup>11</sup> Besides, the new area brought under cultivation during the period is likely to belong mostly to uproan land, i.e., unirrigated areas. In contrast, in the plains part

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<sup>11</sup> Planning Department, Government of U.P., 'Draft Sixth Five Year Plan, 1980-85', (Review), Vol.I, p.247.

of Nainital, exploitation of surface as well as ground water for irrigation, is relatively easier.

The data on sources of irrigation also support the observations made above. In Almora and Pithoragarh, the largest source of irrigation is 'other sources' comprising mainly guls and reservoirs. In Nainital, canals are the major source of irrigation, followed by tubewells. In Nainital, a big increase in the irrigated areas by tubewells is significant to note in-so-far as tubewells imply use of ground water resource, involve less costs to dig and maintain, and thus eminently suit small farmers.<sup>12</sup>

It is interesting to note in this context that the increase in tubewells, is solely accounted for by the private tubewells. State tubewells are in small number and have shown insignificant increase. For instance in Nainital as against 27 and 54 State tubewells in 1975-76 and 1977-78, the respective figures of private tubewells accounted for 348 and 477.

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<sup>12</sup>Agarwal, A.N. (1981), 'Indian Economy : Problems of Development and Planning', Vikas Publishing House Pvt. Ltd., New Delhi, p.355.

#### 6.2.7 Fertilizers

Since the extent of use of other inputs particularly chemical fertilizers and HYV seeds depends upon the availability of water. We find expectedly that - per hectare use of fertilisers is very high (97 kg per hectare) in Nainital, which is more than double of the State average (47 kg per hectare). With dismally low extent of irrigation in Almora and Pithoragarh, it is understandable that the per hectare fertiliser use is almost negligible 4 kg and 2 kg respectively. It is due to the high level of fertiliser use in Nainital that average for Kumaon as a whole at 52 kg is higher than the State average (47 kg).

Consumption of fertilizers has apparently gone up during 1976-81, the increase is higher in Kumaon (58 per cent) than U.P. (50 per cent) and further higher in Nainital (65 per cent). A 91 per cent increase in Pithoragarh does not convey much due to the very low initial level. In Almora, the consumption of fertilizers has decreased from 5 kg to 4 kg over the period.

#### 6.2.8 High Yielding Varieties

Alongwith fertilizers and mechanical contrivances, high yielding varieties (HYV) as a concomitant factor,

**Table 6.9 : Per Hectare Use of Fertilizers in Kumaon and Uttar Pradesh  
From 1976-77 to 1980-81**

Districts	Fertilizer	% Increase	1976-77	1977-78	1978-79	1979-80	1980-81
(in Kg.)							
Almora	N	6.48	2.47	2.34	2.26	2.54	2.63
	P	21.55	1.16	1.03	0.93	1.14	1.41
	K	(-)	1.11	0.97	0.84	0.62	0.35
	Total	(-)	4.74	4.34	4.03	4.30	4.39
Pithoragarh	N	105.63	0.71	0.81	0.85	1.20	1.46
	P	145.45	0.22	0.34	0.41	0.60	0.54
	K	(-)	0.19	0.27	0.14	0.08	0.14
	Total	(-)	1.12	1.42	1.40	1.88	2.14
Nainital	N	37.68	46.82	47.06	57.43	66.91	64.46
	P	184.90	7.75	12.54	18.27	18.97	22.08
	K	86.99	5.69	5.72	7.65	8.72	10.64
	Total	61.27	60.26	65.32	83.35	94.60	97.18
Kumaon	N	37.15	25.12	24.82	30.96	35.64	34.45
	P	171.82	4.40	6.76	9.94	10.27	11.96
	K	70.39	3.31	3.27	4.27	4.72	5.64
	Total	58.51	32.83	34.85	45.17	50.63	52.04
Uttar Pradesh	N	42.94	24.78	27.97	33.07	31.13	35.42
	P	96.13	4.39	6.02	8.86	7.46	8.61
	K	37.76	2.41	3.14	3.40	2.94	3.32
	Total	49.94	31.58	37.13	45.33	41.53	47.35

Note : i) The districtwise respective data of the Hill Region are not available upto the year 1975-76.

ii) (-) denotes decrease over time 1976-77 - 1980-81.

Source : Ibid.



have also come into use in agriculture.<sup>13</sup> The introduction of HYV of crops has ushered in an agricultural revolution in the country.<sup>14</sup> The relative positions of Kumaon and U.P. in respect of use of HYV is illustrated in table 6.10. It is clear that the percentage of area under HYV has been higher in U.P. than Kumaon but the overall increase is substantially higher in the latter than the former. If we look into the district-wise figures, it is observed that use of HYV has always been the highest in Nainital even higher than the State. The reasons are obvious and explained earlier.

Among the HYV, wheat tops the list followed by paddy everywhere except Almora where till 1978-79, maize ranks first and wheat comes next in the order. Thereafter, paddy succeeds maize followed by wheat. The cultivation of HY maize has, however, been insignificant in U.P. Introduction of HYV in a sizeable proportion of the total cropped area and considerable increase therein over time

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<sup>13</sup> Bhattacharjee, J.P., 'Mechanisation of Agriculture in India - Its Economics', Indian Journal of Agricultural Economics, 1940-1964, Selected Readings, op. cit., p.74.

<sup>14</sup> Sharma, R.K. & Tewari, S.C., 'Resource Use Productivity of Hill Agriculture in Himachal Pradesh', Paper read at the Thirty-Eighth Annual Conference of the Indian Society of Agricultural Economics, Jorhat, January 18-20, 1979.

Table 6.10 : Percentage Area Under High Yielding Varieties in Kumaon and Uttar Pradesh (from 1974-75 to 1980-81)

		1974-75	1975-76	1976-77	1977-78	1978-79	1979-80	1980-81	% Increase (1975-81)
Almora	1	20.05	20.26	22.28	25.34	27.72	26.43	29.86	66.05
	2	20.64	30.08	54.60	61.01	29.10	16.27	16.06	- 20.08
	3	20.63	22.88	23.49	28.60	28.20	24.06	26.63	40.22
Pithoragarh	1	13.74	13.63	12.63	13.60	19.04	13.41	15.96	21.07
	2	7.28	5.09	6.56	12.68	10.04	7.47	10.96	84.43
	3	21.58	19.23	21.18	20.43	21.60	18.54	20.53	- 2.43
Nainital	1	39.38	45.82	54.22	57.02	58.91	63.44	61.76	95.16
	2	14.30	19.58	19.03	22.70	25.87	41.51	35.32	74.37
	3	57.20	61.18	72.97	75.34	73.67	69.75	69.50	69.37
Kumaon Region	1	30.00	33.14	38.71	41.70	44.15	45.47	46.97	84.08
	2	13.93	18.09	19.98	23.73	23.11	31.21	28.40	63.09
	3	37.86	40.20	47.66	50.14	50.71	46.70	48.40	55.48
Uttar Pradesh	1	32.20	34.47	36.09	44.56	45.94	43.23	48.17	78.79
	2.	1.98	1.71	1.86	2.67	3.65	2.76	3.17	42.21
	3	67.48	73.60	80.02	81.16	78.50	68.94	76.57	49.61

Note : 1 denotes Exotic Paddy, 2 Hybrid Maize, 3 High Yielding Wheat.

Source : Directorate of Agriculture, Intensity Department, Uttar Pradesh, Lucknow.

in Almora and Pithoragarh despite a decline in irrigated area (Table 6.8) remains, however, puzzling. Nevertheless, the situation in a way suggests that cultivation of HYV is not so much conditioned by availability of water as the use of fertilizers. This contention is also supported by the findings of the Department of Agricultural Research and Education (D.A.R.E.) derived from its actual field trials in different parts of the country for different crops.<sup>15</sup>

#### 6.2.9 Agricultural Mechanisation and Implements

The figures of agricultural machinery and implements and growth in their numbers during 1972-78 (Table 6.11) suggests that while there has been introduction and increasingly larger use of mechanisation in agriculture, the extent and growth of mechanisation has been relatively low in the Kumaon region. And whatever use of modern implements has grown in this region is also almost wholly accounted for by Nainital district. In the entirely hilly districts

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<sup>15</sup> Report of DARE, 'Simple Fertilizer Trials on Cultivators Fields 1967-68 to 1970-71'.



Table 6.11 : District-wise Agricultural Machinery and Implements in Kumaon and Uttar Pradesh, 1972 & 1978

1.1972 2.1978 3.% In- crease	Tra- ctors	Ploughs	Carts	Pumping Sets	Persian Wheels	Thresh- ers	Power Chaff Cutters	No. of Fish- ing Gears	No. of Fish- ing Crafts	Sugar- cane Crushers	Oil Crushers	Germ Killer and Sprayers
1	3	100409	93	5	-	11	2	677	21	91	24	2627
2	5	105397	77	5	-	4	1	22	-	1313	15	991
3	+66.67	+4.97	-17.20	0	-	-63.64	-50.00	-96.75	-100.00	+1342.86	-37.50	-62.28
1	1	67853	-	7	-	-	-	-	-	53	1	485
2	-	67967	-	1	-	-	-	19	-	1	-	4443
3	-100.00	+1.17	-	-85.71	-	-	-	-	-	-98.11	-100.00	+816.08
1	2819	94104	26685	4217	126	1205	211	8114	33	2186	20	10111
2	3765	88214	28425	7813	45	3629	729	10054	32	440498	32544	24585
3	+33.56	-6.26	+6.52	+85.27	-64.29	+201.16	+245.50	+23.92	-3.03	+20050.87	+1626.20	+143.15
1	2823	262366	26778	4229	126	1216	213	8791	54	2330	45	13223
2	3770	261578	28502	7819	45	3633	730	10095	32	441812	32659	29918
3	+33.55	-0.30	+6.44	+84.89	-64.29	+198.77	+242.72	+14.83	-40.74	+18861.89	+72475.55	+126.26
1	43789	9671348	2230879	311887	249054	82066	39097	100121	11726	429599	37086	96165
2	74100	9967804	2291336	659331	230628	220100	94721	90596	11573	N.A.	N.A.	105452
3	+69.22	+3.07	+2.71	+111.4	-7.40	+168.20	+142.27	-9.51	-1.30	-	-	+9.66

Note : i) + denotes 'increase' and - 'decrease' over the period 1972-78.

ii) N.A. denotes 'Not Available'.

Source : Livestock Census in Uttar Pradesh, 1978, Provisional Report, Board of Revenue, Uttar Pradesh, Lucknow, August 1980.



of Almora and Pithoragarh, agricultural technology has continued to be traditional and manual. Ploughs constitute the single largest implements in these districts although germs-killers and sprayers and some sugarcane crushers seem to have been introduced.

The predominantly manual technology implies greater use of labour and hence larger employment. But at the same time, it also means low productivity per acre and per worker. Further, use of modern technology has also been found not necessarily labour replacing, in fact it is found to generate larger total employment through the indirect effects of rising productivity and incomes. In this perspective the predominance of traditional technology does not necessarily offer a good sign for creation of productive employment in Kumaon region especially in its hilly parts.

### 6.3 Diversification into Horticulture

The Kumaon hills are agro-climatically more suitable for growing temperate and subtropical fruits. The impact of horticulture development has been to wean away the farmers from jhum cultivation and to plant the abandoned jhum fields and community lands with horticultural saplings. This helps in preventing soil erosion, and creates prospects

of supplementary income from horticulture for the farm people. Therefore, a high priority has accordingly been given to horticulture for optimal exploitation of agro-climatic conditions of the hill areas for growing different fruits and vegetables.<sup>16</sup> Consequently, area under horticulture as also total output of fruits as per figures obtained from office of Joint Director, Horticulture, Kumaon Division, Nainital have tended to increase in the region (Table 6.12).

An interesting feature revealed by table is that not only the area under horticulture and output have been much more in Nainital but per hectare productivity is also well higher in this district. In this respect, it is observed that Ramgarh block of Nainital district is especially suited for fruit cultivation.<sup>17</sup> The decline in fruit production

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<sup>16</sup>, The important programmes which are under implementation include development of fruit belts and orchards, renovation of orchards, setting up of improved nurseries, establishment of mobile units, intensification of potato development, providing subsidy on transportation, expansion of horticulture and plant protection operations etc.' Papola T.S., et. al. (1983) : 'Development of Hill Areas : Issues and Approaches', Himalaya Publishing House, Bombay, p.197).

<sup>17</sup>, 'Audhogik Margdarshika', May 1983, Office, Joint Director Industries, Kumaon Division, Nainital, p.21.

Table 6.12 : Area Under Horticulture and  
Production in the Three  
Districts of Kumaon Region

(Area in Hectares & Production in Metric Tonnes)						
	A=Area P=Produ- ction	1978-79	1979-80	1980-81	1981-82	1982-83
Almora	A	18996	19516	20516	21085	22107
	P	23000	16990	19459	42500	26695
Pithoragarh	A	10049	10453	11315	12941	14109
	P	15000	12900	12290	29300	5635
Nainital	A	20460	21047	21512	22416	23216
	P	69765	83210	76350	92200	30762
Kumaon Region	A	49505	51016	53343	56442	59432
	P	107765	113100	108099	164000	63092

inspite of increase in area under horticulture is attributable to heavy hailstroms in the respective years.

No doubt, horticulture may be an effective means of productive employment in the hills, yet its development is constrained by a variety of factors. First, inadequacy of transport facilities from the areas of fruit production to the main roads prevents the farmers from getting a fair price for their products. As a result, even high quality fruits perish or are disposed of at throw away prices.



Second, no regulated fruit markets exist within the hill areas with the result that fruit growers have to deal directly with commission agents in large cities from a weak bargaining position. Third there is a great dearth of cold storage facilities for regulating marketing facilities at higher altitudes. Fourth, there is a long time lag between the planting of fruit trees and their fruition. As a consequence, many farmers are unable to find the means of subsist during the non-remunerative period of establishment of orchards.<sup>18</sup>

In order to flourish horticulture on a mass scale, efforts should, therefore, be made to develop a chain of cold storage and cool house facilities at suitable places in hill areas. It is also suggested that stores and warehousing facilities should be provided at the potential centres where the regulated markets may be established. The Forest Department should maintain regular supply of wood for manufacture of packing cases to the growers at reasonable prices. Besides, there is much scope for growing mushrooms in the region. Concerted efforts for growing it

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<sup>18</sup> Budhraj, J.C., Tewari R.T. & Srivastava, D.C., 'Strategy Alternatives for Accelerated Development of Hill Areas', paper presented in the 'Seminar on Development of Hill Areas', held at Nainital, 21-24 April, 1980.



and their proper disposal are still to be undertaken systematically. Thanks to the Kumaon University and the Training Extension Project, Hawalbagh, mushroom cultivation has been successful in Nainital and surrounding areas. To carry out this programme on a large scale, it would be essential to produce spawn within the hills and make proper arrangements for inputs like gypsum, super phosphate, casing soil, fungicides, etc. at production centres.

#### 6.4 Conclusion

The main finding emerging from the preceding analysis is that the availability of land particularly in the hilly part of Kumaon has been low and has further lowered during the period. In the given set up, a substantially more labour force is engaged in agriculture than is actually needed. No doubt, a change in organisation, technology and cropping pattern may lead to a higher optimum level and in turn may increase employment potential in agriculture. But an examination of all these variables brings forth the fact that the scope of any substantial increase in employment in agriculture is highly limited. Therefore, it is necessary to look outside agriculture for generating effective employment to which we turn in the next chapter.

## Chapter VII

### EMPLOYMENT IN INDUSTRY : GROWTH AND POSSIBILITIES

The hill area of the Kumaon region has remained insulated from the full impact of development activities on account of its special geographical situation and represents a special case of economic backwardness. Its peculiar geographical conditions and the undulated nature of the terrain impose severe constraints on the pace of development on the one hand and the efficacy of infrastructural facilities on the other.<sup>1</sup> Development of industrial sector of the region is particularly constrained by the lack of pre-requisite infrastructural facilities especially transportation, communication, power, and marketing.<sup>2</sup> In consequence, even the local resources have not been utilised judiciously and fully. That is why the manufacturing industries are virtually absent in the region except in certain peripheral

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<sup>1</sup>Planning Department, Uttar Pradesh, 'Draft Sixth Five Year Plan 1980-85' (Review), Vol.I, p.127.

<sup>2</sup>'Report of the Seminar on Development of Hill Areas', Giri Institute of Development Studies, Lucknow, held at Nainital, 21-24 April, 1980, op. cit., p.4.

locations - especially those adjoining the plains. Yet for a sustained and balanced economic development of the region, development of the industrial sector cannot be neglected as development of the other sectors also gets momentum from industrial sector. Keeping this fact in view an appraisal of the industrial progress and potential of the region seems necessary not only for the balanced development of the region, but also for generating more employment opportunities to tackle the problem of backwardness of the region.

An attempt is made in the present chapter to portray the salient features of the level, structure and growth of industries in Kumaon region with a view to examining the potential of this sector to provide employment and income opportunities to the growing labour force. Limited, no doubt, is the extent of industrialisation in the region, but much more limited is the availability of data on whatever industries exist there. Data collected under Annual Survey of Industries is confined only to the registered factories while a large part of industrial activities in Kumaon region is likely to consist of unregistered and household units. Supplementing the ASI data with those available from the Regional Directorate of Industries and



other sources, we have tried to outline the industrial situation, but the coverage is still likely to be far from comprehensive.

### 7.1 Level and Extent of Industrial Activity

The entire Kumaon region reported a total number of 66 factories only in 1978-79, of which 53 were in Nainital district, the other two entirely hilly districts sharing the other 13 factories (Table 7.1). The 66 factories employed a total of 8450 persons, of which the Nainital factories alone had an employment of 7733 persons.

The above picture based on the information from ASI is more or less confirmed by the data from the population Census, though the latter has a wider coverage. The units covered in ASI would all be included in the 'non-household' category of the Census, which would also be covering the unregistered non-household units. The census figure of employment (1971) in the non-household sector (16472) is, therefore, higher than the figure reported above. Employment in the household sector in 1971 was reported to be 11338 persons thus making a total industrial employment of around 28000 persons, constituting around 4 per cent of total workers in 1971. For 1981, the household industry



Table 7.1 : District-wise Factories, Capital, Employment, Output and Value Added in the Kumaon Region, 1965 to 1978-79

Districts/Particulars	1965	1968	1969	1971	1973-74	1974-75
1	2	3	4	5	6	7
<u>District Almora</u>						
<u>Factories :</u>						
Registered & Working	2	6	6	5	6	4
Submitted Return	2	5	4	5	6	4
Employment	69	140	139	164	183	314
Capital	6.00	23.56	41.29	28.16	34.32	234.01
Output	8.50	19.92	25.45	32.49	34.32	50.50
Value Added	2.90	3.36	1.59	3.52	13.42	2.22
<u>District Nainital</u>						
<u>Factories :</u>						
Registered & Working	19	44	40	37	46	43
Submitted Return	18	34	37	36	45	43
Employment	2397	2646	3353	3173	4728	6402
Capital	253.20	451.48	414.54	443.70	915.47	1002.22
Output	472.60	753.35	992.59	1030.60	1554.32	1690.68
Value Added	99.70	166.75	185.54	149.51	227.13	186.51
<u>Kumaon Division</u>						
<u>Factories :</u>						
Registered & Working	21	50	46	42	52	47
Submitted Return	20	39	41	41	51	47
Employment	2466	2786	3492	3337	4911	6716
Capital	259.20	475.04	455.80	471.86	949.79	1236.24
Output	481.10	773.27	1018.04	1063.09	1588.64	1741.18
Value Added	102.60	170.11	187.13	153.03	240.55	188.73
<u>Uttar Pradesh</u>						
<u>Factories :</u>						
Registered & Working	1525	3598	3619	3649	4299	4425
Submitted Return	1353	3260	3381	3573	4174	4330
Employment	191329	317118	364992	401156	437860	502046
Capital	12100.10	77889.10	106882.45	135872.87	170056.22	197892.03
Output	26392.00	72479.67	88255.27	103915.15	139961.70	176382.94
Value Added	5364.80	14879.73	19597.07	20887.97	30521.47	37072.67

Contd.../-

	1975-76	1976-77	1977-78	1978-79	Increase (1965-79)	
	8	9	10	11	Absolute 12	% 13
<u>District Almora</u>						
<u>Factories :</u>						
Registered & Working	7	6	9	13	11	550
Submitted Return	7	6	7	12	10	500
Employment	658	380	363	717	648	939.13
Capital	79.32	320.79	347.88	467.27	461.27	7687.83
Output	113.50	177.91	255.80	411.78	403.28	4744.47
Value Added	(-)0.28	30.22	55.43	61.83	58.93	2032.06
<u>District Nainital</u>						
<u>Factories :</u>						
Registered & Working	45	40	49	53	34	178.95
Submitted Return	44	40	46	49	31	172.22
Employment	6042	6729	19617	7733	5336	222.61
Capital	1199.36	1132.52	3048.52	3808.83	3555.63	1404.28
Output	2935.32	2781.70	3245.09	4605.54	4132.94	874.51
Value Added	457.51	609.67	139.95	361.30	261.60	262.39
<u>Kumaon Division</u>						
<u>Factories :</u>						
Registered & Working	52	46	58	66	45	214.28
Submitted Return	51	46	53	61	41	205.00
Employment	6700	7109	19980	8485	5984	242.66
Capital	1278.68	1453.31	3396.40	4276.10	4016.90	1549.73
Output	3048.82	2959.61	3500.89	5017.32	4536.22	942.88
Value Added	457.23	639.89	195.38	423.13	320.53	312.41
<u>Uttar Pradesh</u>						
<u>Factories :</u>						
Registered & Working	4534	4719	5958	6582	5057	331.61
Submitted Return	4470	4648	5048	5280	3927	290.24
Employment	577478	607234	667523	664667	473338	247.39
Capital	221470.13	256060.60	286551.64	357804.21	355704.11	2857.03
Output	198395.88	227319.74	262506.24	297793.38	271401.38	1028.35
Value Added	38523.41	44652.75	52579.24	59283.16	53918.36	1005.04

Note i) Upto 1978-79, due to less than three factories in Pithoragarh, their informations are included in Almora  
ii) In 1966, 67, 70 and 1972, there was not any 'Annual Survey of Industries' in the State.

Source: Annual Survey of Industries of the respective years, Economics and Statistics Division, State Planning Institute, U.P., Lucknow.

Table 7.2 : Employment in Manufacturing Sector Household and Non-Household in Kumaon and Uttar Pradesh

(From 1961 to 1981)

Year	Manufacturing (Household)			Manufacturing (Non-Household)		
	P	M	F	P	M	F
Almora						
1961	6853(1.82)	5121(3.03)	1732(0.84)	1161(0.31)	1157(0.68)	4(0.00)
1971	3260(1.12)	2850(1.63)	410(0.35)	2246(0.77)	2210(1.26)	36(0.03)
1981	5161(2.29)	4568(3.40)	593(0.65)			
Pithoragarh						
1961	5528(3.50)	3128(4.37)	2400(2.79)	328(0.21)	304(0.42)	24(0.03)
1971	2628(2.10)	1847(2.46)	801(1.57)	589(0.47)	553(0.74)	36(0.07)
1981	4334(2.40)	2830(2.83)	1504(1.87)			
Nainital						
1961	16176(5.82)	11823(5.55)	4353(6.73)	7848(2.82)	7442(3.49)	406(0.63)
1971	5430(2.05)	5073(2.13)	357(1.32)	13637(5.15)	13378(5.62)	259(0.96)
1981	11055(3.06)	10289(3.23)	766(1.79)			
Kumaon Region						
1961	28557(3.52)	20072(4.42)	8485(2.37)	9337(1.15)	8903(1.96)	434(0.12)
1971	11338(1.66)	9770(2.00)	1568(0.81)	16472(2.41)	16141(3.31)	331(0.17)
1981	20550(2.67)	17687(3.19)	2863(1.33)			
Uttar Pradesh						
1961	2212041(7.67)	1319180(5.87)	482566(7.57)	800835(2.77)	711059(3.43)	29776(0.47)
1971	1001605(3.66)	892861(3.63)	108744(3.92)	989815(3.62)	961167(3.91)	228648(1.03)
1981	1419231(4.39)	1235462(4.24)	183769(5.86)			

Note : i) P denotes Person, M Males and F Females.

ii) In the 1951 Census, industrial workers' classification is not available by household and non-household.

iii) In the 1981 Census, workers in non-household manufacturing sector are included in 'other workers' and thus are not available separately.

iv) Figures in parentheses refer to percentage to total workers.

Sources : i) Census of India, 1961 & 1971, U.P., General Economic Tables.

ii) Census of India, 1981, Uttar Pradesh, Paper 1 of 1981 Supplement, Provisional Population Totals, pp.112-113.



employment is reported at 20550, the figures for non-household employment are not yet available. It is noted here also that 83 per cent of non-household industrial employment of the region in 1971 and 54 per cent of the household employment in 1981 was in Nainital district alone. And while the employment in non-household and household industries constituted 7 per cent of total labour force in Nainital, the corresponding percentages in Almora and Pithoragarh were around 2 per cent in 1971.

Thus the already low level of industrial development in the region has primarily been concentrated in the plains area of the region, leaving the hilly terrain virtually devoid of industrial activity. It is, however, encouraging to note that, the wholly hilly districts of Almora and Pithoragarh, have witnessed substantially higher increases not only than Nainital but also the State in the number of factories, employment, capital and output. It may be noted that these districts are 'specially backward' eligible for special concessions and incentives, which seem to have been able to play an effective role. The higher growth rate of employment in these backward districts can also be explained in terms of the predominance of small and labour intensive industrial units located there.



Like the share in employment, the contribution of manufacturing sector to the regional income is relatively very low. Its share in the total income from commodity producing sectors was around 7 per cent in the region in 1976-77 of which 4 per cent was contributed by the registered units. Percentages for Nainital, Almora and Pithoragarh were 8.5 and 4 respectively. The major share was contributed by unregistered units in Almora and Pithoragarh and by registered units in Nainital. Of the total value added by manufacturing in the Kumaon region, 56 per cent was contributed by Nainital, 26 per cent by Almora and 18 per cent by Pithoragarh.

## 7.2 Productivity and Capital Intensity

Looking at the pattern of industrial growth in Kumaon region from the view point of employment generation, it is striking to note that capital intensity of employment both in terms of fixed and total capital per worker has increased rapidly during 1965-79. The increase has been quite high in the whole State as well, but that in entirely hilly districts of Almora and Pithoragarh has been particularly striking especially in fixed capital per worker. This is probably due to the recent initiation of certain larger

**Table 7.3 : Percentage Share of Manufacturing Sector to Total Income in the Kumaon Region (at Current Prices) (Commodity Producing Centre**

		(Rs. crore)			
	1. Registered 2. Unregistered 3. Total	1960-61	1968-69	1970-71	1976-77
Almora	1	0.90	0.14	0.27	0.85
	2	5.06	2.24	2.05	3.21
	3	42.52	36.97	40.22	26.32
Pithoragarh	1				-
	2	Included in Almora			5.21
	3				17.50
Nainital	1	2.05	3.79	7.01	6.45
	2	5.53	1.74	1.74	1.78
	3	57.48	63.03	59.78	56.18
Kumaon Region	1	1.56	2.44	4.30	3.85
	2	5.33	1.92	1.87	2.76
	3	100.00	100.00	100.00	100.00

Source : District Domestic Net Output, Uttar Pradesh, (Commodity Producing Sectors), 1960-61, 1968-69, 1970-71 and 1976-77, Economics and Statistics Division, State Planning Institute, Uttar Pradesh.

capital intensive units in these districts as a part of the special drive to locate industries there. As evidenced in other research findings<sup>3</sup> also, the figures also support

<sup>3</sup>Papola, T.S. (1982), 'Rural Industrialisation : Approaches and Potentials', Himalaya Publishing House, Bombay, pp.56-76.

the fact that the increase in productivity is accompanied by the increase in fixed capital. A higher increase in fixed capital per worker in Almora and Uttar Pradesh is accompanied in larger gains in productivity, while Nainital with low increase in capital intensity also had lower productivity increase. It is, however, noticed that while the relative increase in output per worker in Almora has been commensurate with increase in capital intensity as compared to U.P., the increase in value added per worker has been relatively low. It, therefore, seems that new investments in industries in the hills have not necessarily been in the value adding industries.

Thus, the employment expansion on a substantial scale may not be forthcoming from the large capital intensive units as such, though they have some indirect and induced effects on the employment and income situation. The smaller and household industries could, therefore, be looked upon as the potential sources of employment on a larger scale. It is found in their cases that the problems relating to their technological, market and other aspects have inhibited growth to a large extent. Dearth of requisite materials found to have constrained some of the local rural and household industries based on available skills, technology

**Table 7.4 : Per Worker Output, Value Added and Capital Intensity in Kumaon Region and Uttar Pradesh (In Rs.)**

Particulars		1965	1971	1975	1979	Increase (1965-79) %
Almora and Pithoragarh	1	21794	26415	27596	82521	60727
	2	7436	2862	1213	19383	11947
	3	2898	3957	38255	42471	39593
	4	8696	17170	74525	68830	60134
Nainital	1	24640	43669	33746	77665	53025
	2	5198	6330	3721	6098	900
	3	6737	7623	8269	21548	14811
	4	10563	13984	15660	34334	23771
Kumaon Region	1	24583	42866	33484	78158	53575
	2	5243	6158	3353	7130	1887
	3	6630	7443	9671	23316	16686
	4	10511	14140	18396	37249	26738
Uttar Pradesh	1	15616	30927	41126	55351	39735
	2	3174	6222	9129	11023	7849
	3	3913	26421	29083	39826	35913
	4	6325	60230	39421	53805	47480

Note : 1) 1 for output per worker; 2 for value added per worker; 3 for fixed capital intensity; and 4 for total capital intensity.

Source : 'Annual Survey of Industries', 1965, 1971, 1975 and 1979, Economics and Statistics Division, State Planning Institute, U.P., Lucknow.



as well as markets.<sup>4</sup>

A distinct feature revealed by the district-wise figures is that though Nainital had a higher industrial base to begin with, it has lagged behind Almora and Pithoragarh in the growth of output and capital investment over the period. The overall increase witnessed by Almora and Pithoragarh over the period has been substantially higher as compared with those of Nainital. This may reflect, to a certain extent, the special efforts made to take industries to the backward districts and a degree of effectiveness of the provisions of concessions and incentives available to industrial units in these districts.\*

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<sup>4</sup>Papola, T.S. (1980, 'Production of Woollen Carpets in Kumaon and Garhwal', (Mimeo. report), GIDS, Lucknow.

\* The main concessions and subsidies for encouraging development of hilly and backward areas are the following :

- (i) Undertaking of specific projects (e.g. Indo-German Agricultural Development Projects, and Central Sector Hill Area Projects, in Pauri Garhwal, Nungla),
- (ii) Central Subsidy of 15 per cent on fixed capital with a maximum of Rs.15 lakhs,
- (iii) Transport subsidy (50% from rail head to project location),
- (iv) Income tax exemption (20 per cent of the profits for 10 years),
- (v) Concessional credit from national and State financial institutions,
- (vi) Hire purchase facility for machinery (through National Small Industries Corporation and State Corporations),
- (vii) Price preference by State Government,
- (viii) Lower rates for electricity,
- (ix) Sales tax refund loan scheme interest free repayable after 12 yrs.,
- (x) Tax exemptions (e.g. Sales Tax), and
- (xi) Interest-free loans for specific purposes to certain categories.

### 7.3 Industrial Structure in the Kumaon Region

According to the records of the Industry Department of the State Government (Table 7.5) there were a total of 1114 industrial units in the region in 1981-82. About 69 per cent of them are located in Nainital district. Only 11 units were in the category of large and medium of which again 7 are located in Nainital district and 2 each in Almora and Pithoragarh. Estimates of employment in the small units are not available but 11 large and medium units are reported to have a total work force of 5091 workers, of which 4621 were in the 7 units in Nainital district.

**Table 7.5 : Present Industrial Position in the Kumaon Region (Upto 1981-1982)**

	<u>Large &amp; Medium Scale</u>		<u>Small Scale</u> units	<u>Total</u> units
	Units	Employment		
Almora	2	409	215	217
Pithoragarh	2	159	136	138
Nainital	7	4621	572	759
Kumaon Region	11	5091	1103	1114

Source : 'Marg Darshika : Kumaon Mandal Mai Audhogic Vikas', (in Hindi), (1982), Industry Department, Kumaon Division, Nainital, pp.16-19.

Product-wise structure of industries in the region appears well diversified as about 10 industry groups have a significant number of units (Table 7.6). Yet two industry groups, agro-based and forest based alone account for 50 per cent of the total units. An encouraging feature to note is that chemical products are emerging as a significant growth in the region; with 130 units, it

Table 7.6 : Product-wise Number of Registered Industries in the Kumaon Region

(Upto 1981 - 1982)

Product-wise Industries	Almora	Pithoragarh	Nainital	Kumaon
1. Agro-based industries	47	38	310	395
2. Forest based	55	19	94	168
3. Tin & Steel based	-	9	41	50
4. Chemical based	33	7	90	130
5. Hosery and textile based	14	8	23	45
6. Printing & press	-	5	22	27
7. Leather based	4	1	8	13
8. Mineral based	-	5	31	36
9. Automobile based	26	7	50	83
10. Utensil base	-	2	7	9
11. Stationary based	6	2	6	14
12. Miscellaneous industries	32	35	77	144
Total	217	138	759	1114

Source : Ibid, p.199.

constitutes now the third largest group in terms of number of units. Automobiles is the next important group, but it may be noted that the units in this group consist of small

repair workshops, and not large manufactures. The industrial structure of Nainital is decidedly more diversified than of Almora and Pithoragarh.

Agro-based industries has the largest number in each district. These comprise mainly flour mill, rice mill, sugar mill, gur and khandsari, agricultural tools manufacturing etc. The available data for the last three years indicate that there has been a continuous increase in their number in the region. Since the plains area of Nainital district have a highly developed agriculture, the maximum foodgrain-based units and also agricultural tools manufacturing industries are to be found there. On the other hand, the expansion of these industries is limited in Almora and Pithoragarh, first, because of predominance of subsistence agriculture, and, second because of difficulties of the application of modern agricultural implements in the hill agriculture. The dearth of adequate raw material from local sources and problem of marketing for the finished goods have limited the expansion and development of agro-based industries in these districts.<sup>5</sup>

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<sup>5</sup> 'Industrial Directory', Industry Department, Kumaon Division, Nainital, 1981-82, pp. II-III.



#### 7.4 Household Industries

On account of the lack of data regarding household industries, it is difficult to examine their status and problems in the required detail and depth. We have, therefore, utilised here some data available from an earlier survey conducted by Directorate of Economics & Statistics U.P. during 1968-69 to get a broad picture of the situation of these industries in the region.

The data relate to the entire hill region of U.P., and not only to the three districts of Kumaon, covered in our study. From the figures of household industrial units (1968-69) as given in Table 7.7, two important facts emerge. First, the hill region has only a small proportion of total household industries in U.P., the number of units in the region constitute only 1.2 per cent of total such units in the State, 1.3 per cent of total capital and 1.4 per cent of total employment. Thus, the household industry base is also very low in the hill region. Second, this little industrial base is, however, quite well diversified. The two largest industry groups, namely, miscellaneous textiles (mainly woollen) and food stuff, no doubt, alone claim 32 per cent of units, 29 per cent of capital and 20 per cent

Table 7.7 : Household Industry-wise Units, Capital and Employment in the Hill Region and Uttar Pradesh, 1968-1969

Indus- try Group	Industries		Hill Region					
			Units		Capital		Employment	
			Number	%	(Rs. '000)	%	Man-days ('000)	%
1	2	3	4	5	6	7	8	9
20	Food Stuff	R	2689	15.27	7943	49.73	784	23.16
		U	4248	43.24	2706	22.33	2583	58.80
		T	6937	25.29	10649	37.91	3367	43.29
23	Cotton Textile	R	278	1.58	153	0.96	8	0.23
		U	258	2.63	324	2.67	157	3.57
		T	536	1.95	477	1.70	165	2.12
26	Silk Textile	R	-	-	-	-	-	-
		U	-	-	-	-	-	-
		T	-	-	-	-	-	-
27	Woolen Textile	R	7650	43.45	2961	18.54	1144	33.80
		U	1091	11.11	5225	43.12	449	10.22
		T	8741	31.87	8186	29.14	1593	20.48
28	Manufacturing of Forest Products	R	2215	12.58	989	6.19	348	10.28
		U	1466	14.92	2988	24.66	336	7.65
		T	3681	13.42	3977	14.16	684	8.79
31	Leather and Leather Products	R	613	3.48	457	2.86	206	6.08
		U	894	9.10	-131	-1.08	309	7.03
		T	1507	5.49	326	1.16	515	6.62
34	Non-Metric Materials	R	95	0.54	22	0.14	93	2.75
		U	52	0.53	126	1.04	64	1.46
		T	147	0.53	148	0.53	157	2.02
36	Basic Metals and Its Products	R	3090	17.55	1389	8.70	625	18.46
		U	178	1.81	83	0.68	50	1.14
		T	3268	11.91	1472	5.24	675	8.68
38	Transport Equipment	R	216	1.22	213	1.33	83	2.45
		U	228	2.32	32	0.26	70	1.59
		T	444	1.62	245	0.87	153	1.97
39	Miscellaneous Manufacturing Industries	R	762	4.33	1845	11.55	94	2.94
		U	1407	14.31	765	6.32	375	8.54
		T	2169	7.92	2610	9.29	469	6.03
	Total	R	17608	100.00	15972	100.00	3385	100.00
		U	9822	100.00	12118	100.00	4393	100.00
		T	27430	100.00	28090	100.00	7778	100.00

Contd..../-

Indus- try Group	Industries		Uttar Pradesh					
			Units		Capital		Employment	
			Number	%	(Rs. '000)	%	Mandays ('000)	%
			10	11	12	13	14	15
20	Food Stuff	R	978	52.16	1001544	60.86	113903	27.65
		U	54	21.18	78053	17.15	27276	20.71
		T	1032	48.45	1079597	51.39	141179	25.97
23	Cotton Textile	R	205	10.93	276513	16.80	130444	31.67
		U	34	13.33	46434	10.20	24391	18.52
		T	239	11.22	322947	15.37	154835	28.48
26	Silk Textile	R	5	0.27	4527	0.27	3710	0.90
		U	15	5.88	70706	15.53	10728	8.14
		T	20	0.94	75233	3.58	14438	2.66
27	Woolen Textile	R	131	6.97	64098	3.89	36952	8.97
		U	29	11.37	19734	4.33	10975	8.33
		T	160	7.51	83832	3.99	47927	8.82
28	Manufacturing of Forest Products	R	208	11.09	79250	4.81	41195	10.00
		U	20	7.84	14997	3.29	7559	5.74
		T	228	10.70	94247	4.49	48754	8.97
31	Leather and Leather Products	R	58	3.09	27307	1.66	15378	3.73
		U	18	7.06	17757	3.90	8054	6.11
		T	76	3.57	45064	2.14	23432	4.31
34	Non-Metric Materials	R	112	5.97	56075	3.41	32527	7.90
		U	9	3.53	15073	3.31	4984	3.78
		T	121	5.68	71148	3.38	37511	6.90
36	Basic Metals and Its Products	R	76	4.05	48523	2.95	13998	3.40
		U	21	8.23	78247	17.19	15049	11.43
		T	97	4.55	126770	6.03	29047	5.34
38	Transport Equipments	R	10	0.53	4094	0.25	4592	1.11
		U	7	2.74	10590	2.33	2762	2.10
		T	17	0.80	14684	0.70	7354	1.35
39	Miscellaneous Manufacturing Industries	R	92	4.92	83677	5.08	19190	4.66
		U	48	18.82	103560	22.75	19929	15.13
		T	140	6.57	187237	8.91	39119	7.20
	Total	R	1875	100.00	1645608	100.00	411889	100.00
		U	255	100.00	455161	100.00	131707	100.00
		T	2130	100.00	2100769	100.00	543596	100.00

Source : Household Industry Survey, U.P. 1968-69, State Planning Institute, Economics and Statistics Division, U.P., Lucknow.



of employment; and 25 per cent of units, 38 per cent of capital and 43 per cent of capital respectively. But there are sizeable number of units contributing significant employment in other industry group also, particularly forest products, metal products, and leather products.

### 7.5 Forestry

The contribution of forestry and logging to the regional income from the commodity producing sector is given in table 7.8. It is clear from the table that the proportion of forestry and logging has been substantially higher than that of manufacturing sector. For instance, as against merely 7 per cent from manufacturing sector, it accounted for 16 per cent of total gross domestic product in the Kumaon region as a whole in 1960-61. It further rose to about 25 per cent in 1968-69 but thereafter declined to about 12 per cent in 1976-77. Here again, Nainital has not only the major contribution in the forestry income, but has also experienced a faster growth (246 per cent) in the income of this sector in comparison to Almora and Pithoragarh (108 per cent). It would be appropriate at this stage to bring in a discussion on forestry which is an important activity in the region to examine the role it plays in income and employment generation.



On the whole, the figures seem to suggest that the Kumaon is well endowed with forest wealth indicating thereby the possibilities of development of forest based industries in the region. This fact has been recognised by our planners also.<sup>6</sup> It is also seen that forest based industries are the second largest group contributing above 15 per cent of total industrial units in the region. Yet it seems that its potential has not been fully utilized, and, therefore, the full impact of the large forestry sector has not been produced in the region. The forest related activities in the region have primarily been, thus confined to cutting and logging. As a result, although a large part of the net domestic product in the region is made up of the forest produce, yet there exists a significant difference between the value of net output produced in this sector and the value that actually accrues to the region. The latter is only a minor fraction of the former.

Since the British days trees are only cut down and the logs of woods are carried away outside this region. Thus, what comes to the region is a part of the wages paid

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<sup>6</sup>Planning Department, Government of U.P., 'Draft Sixth Five Year Plan 1980-85 (Review), Vol.I, p.413.

by the contractors to the local labour for their services in felling trees and transporting the logs by manual labour.<sup>7</sup> A part of the wage payment is also made by the

Table 7.8 : Income from Forestry and Logging in the Kumaon Region (at Current Prices)

(Rs. crore)				
Districts	1960-61	1968-69	1970-71	1976-77 Increase (1961-77)
Almora	1.98 (13.7)	6.20 (22.4)	8.19 (18.5)	4.12 (5.9) 2.14 (108.1)
Pithoragarh	Included in Almora			2.43 (8.4)
Nainital	3.54 (18.1)	12.26 (26.0)	18.53 (28.1)	12.57 (13.6) 9.03 (255.1)
Kumaon	5.52 (16.3)	18.46 (24.7)	26.72 (24.2)	19.12 (11.6) 13.60 (246.4)

Figures in parentheses refer to percentage to total income from commodity producing sector.

Source : District Domestic Net Output, Uttar Pradesh, (Commodity Producing Sector), 1960-61, 1968-69, 1970-71 and 1976-77, Economics and Statistics Division, State Planning Institute, Uttar Pradesh.

<sup>7</sup>Tewari, G.C. (1982), 'An Economic Profile of the Hill Region of Uttar Pradesh', Occasional Paper No.10, G.B. Pant Social Science Institute, Allahabad, p.37.

forest department on adhoc basis, for other casual jobs. Since, the district net output estimates, however, record the entire value of the forest produce as the income of the region and obviously, to this extent, present an inflated record of the forest income accruing to the region. This is evidenced from table 7.9 where it is estimated that the actual accrued income to the region from its forest sector accounts for barely 14.03 per cent of the total net product of the sector. Thus, the activities of forestry and logging do not produce very significant positive impact on the income levels of the people in the region.

Table 7.9 : Income from Forestry Sector in the Kumaon Region During 1979-80

	(Rs. in lakhs)		
	Total value of forest produce	Wages paid for forestry and logging service	Percentage of wages to total produce
Almora	428.28	62.29	14.55
Pithoragarh	392.28	59.49	15.16
Nainital	2010.60	275.50	13.71
Kumaon Region	2831.36	397.28	14.03

Source : Based on the information collected from the office of the Conservator of Forests, Nainital.

## 7.6 Tourism

The distinct environmental and climatic conditions of Kumaon attracts tourists from every nook and corner of the country. Tourism has acted as a catalytic agent of economic change in many countries and regions. But its effectiveness in performing this role is dependent on several other factors.<sup>8</sup> Tourism in itself provides mainly indirect employment. Its direct contribution to employment is confined primarily to the construction and maintenance of tourist accommodation. The following are the figures relating to this aspect of tourism for the past few years in the hill region of U.P. (Table 7.10).

Table 7.10 : Employment in Tourism in the Hill Region of Uttar Pradesh

Years	During construction period (man-days)	During maintenance (man-year)
1980-81	2,14,358	113
1981-82	2,15,061	114
1982-83	2,42,132	127

Source : Collected from Uttar Pradesh Tourism, 21, Vidhan Sabha Marg, Lucknow.

<sup>8</sup> Singh, T.V. & Kaur, Jagdish, 'Role of Tourism in the Regional Development of Himalayas : Case of Uttrakhand', paper presented in the Seminar on Development of Hill Areas, held at Nainital, April 21-24, 1980.



It is clear from the figures in the above table that employment in tourism has been increasing but it is mostly in construction, which cannot go on for ever. Indirect role of tourism is much more important in-so-far-as it gives spurt to certain economic activities like production of souvenirs and local handicrafts and thereby results in employment and income. In the absence of such linkages in the productive sectors of the local economy, the tourists buy things not locally produced, resulting only in a small margin of their turnover accruing to the local traders.

Further, so far as the role of tourism in increasing employment and income is concerned, it depends upon the development of other factors like transportation, communication, recreation etc. From this point of view, the Kumaon tourism is incipient with ample possibilities of its further development which is growing in isolated pockets in most cases. Therefore, in order to make tourism an effective means of development, it must be integrated with other sectors not only infrastructure but also productive sectors, to reap its maximum benefits.

## 7.7 Conclusion : Constraints and Possibilities of Industrial Development

### 7.7.1 Major Industries

The previous analysis suggests that though agro-based industries have been heavily preponderated in the region as a whole, yet their development has been severely constrained particularly in the hilly portion of the region. The poor state of hill agriculture, as is evidenced in the preceding chapter VI, has resulted in an acute problem of raw material for these industries. Agro-based industries using surplus foodgrains and commercial crop output have a potential mainly in Nainital district (plains) and very limited possibility in the hilly parts of the region, where the agriculture is subsistence based and foodgrains dominated. The meagre number of agro-based industries in Almora and Pithoragarh well tend to substantiate this fact.

The forest-based industries come next to agro-based industries in the region. These industries consist mainly of saw mills, wooden furniture, packing cases, sports goods, timber sleeper, truck body and plywood sheet etc. and, are again concentrated in Nainital district. There are two basis constraints in the development of forest-based industries in the region : one relating to the management and organisation of forests and the other natural and environmental, as explained below.

The forests are broadly of two categories in terms of their management and accessibility of their material for local population : forest managed by the village punchayats which meet the basic needs of fuel and fodder of the villages. These forests are not sufficient even to fulfil these minimum needs, and therefore, almost no wood of these forests is available for use for industrial purposes. The woods of commercial use are found in the reserved forests which are under the Forest Department. Very little of the produce of these forests gets used for the development of forest based industries locally for following reasons : First lack of transport and infrastructural facilities and the consequently heavier cost of production in the hills as compared to the plains have inhibited location of large scale units of forest based industries in the hills. Thus all units using the forest produce of the hills get located in the plains. Second, in the existing system of sale of forest produce, (trees and timber) practised by the Forest Department based on tenders, contracts and auctions leaves hardly any scope for utilisation of the forest produce in small and decentralised basis by the local entrepreneurs. In fact, the products of the Reserved Forests are almost inaccessible to the local people either for production or consumption

purposes. Third, a large scale use of hill forests for industrial development, either locally or elsewhere, is likely to lead to severe environmental damage causing scarcity of water, floods and soil erosion. In fact, these phenomena resulting from the cutting of forests have already assumed serious proportions. All this, however, does not imply that no forest based industries can be developed in the hills. A judicious cutting of trees with necessary afforestation, changes in the system of sale of forest produce to provide greater accessibility to the local people and appropriate policies of incentives to local entrepreneurship can help in growth of such industries in the hills.

Spinning and weaving of woolen textile industries are quite common as household activities but specialised work like carpet weaving is concentrated in a few locations where the Bhotia community is in sizeable number as they were the traditionally skilled people carrying out the woolen industry. Almora and Pithoragarh have a relatively larger concentration of Bhotias and therefore of woolen industries. But this industry has gradually languished over time mainly due to two reasons. Firstly, in earlier years, Bhotias used to get most of their wool requirement



either from Tibet or from their own sheep which were also used for carrying the articles they traded. With the cessation of Indo-Tibetan trade not only the import of wool has discontinued and trading activity have ceased to be their main occupation but their interest in rearing sheep has also declined.<sup>9</sup> This has in turn posed an acute problem of raw material, i.e. wool for these industries. Secondly, the shortage of skilled weavers (especially Bhotias) who are increasingly taking up other activities, and a shrinking market due to competition with modern sector have also adversely affected this industry. It is a happy augury that the government has started Training - cum - Production Centres in different locations for restoring the status of this traditional industry.

Kumaon region is endowed with a variety of local resources, and therefore, there exists scope for the establishment of a few other industries based on local

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<sup>9</sup> Papola, T.S. (1980), 'Production of Woollen Carpets in Kumaon and Garhwal', Giri Institute of Development Studies, Lucknow, pp.25-26.

<sup>10</sup> 'Till 1981-82, the Government has set up the Carpet Training Centres/Sub-Centres (in Dharchula, Didihat, Munsiari, Almora, Ranikhet, Bageshwar, Farsali and Nainital' (Marg Darshika : Industrial Development and Possibilities in the Kumaon Division), (in Hindi), Industry Department, Kumaon Division, Nainital (1981-82), p.27.

resources in the region (Appendix VII). Besides, the region has some distinct locational advantages for the establishment of non-local material based industries with light product.<sup>11</sup> Some industries in the chemicals and engineering groups seem immensely suitable for the region. Chemicals have already emerged as a significant group of industries, as noted earlier, in the region. In the engineering group, electronics and precision instrument units offer a good scope of development without any adverse effect on local resources ecology and environment. In this respect, the recent emphasis on the location of electronic industries in the hills and establishment of Teletronics Limited, Bhimtal (T.V. and electronic goods), U.P. Desitals, Ghorakhal (assembly of watches) and Hindustan Machine Tools Limited, Ranibagh is encouraging.

The Industrial development per se has been constrained so far due to a variety of factors as we have discussed earlier in relation to specific industries. To overcome these constraints to the extent feasible and thus to generate more employment opportunities, some general measures are necessary. Some of them are indicated below briefly.

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<sup>11</sup> Papola, T.S. et. al. (1983), 'Development of Hill Areas : Issues and Approaches', Himalaya Publishing House, Bombay, p.427.

### 7.7.2 Development of General Infrastructure

Broadly speaking, the level of development is largely determined by the quantum of infrastructural facilities available. From this point of view, particularly in an isolated economy like ours, development of roads that is only life-line in the hills has been considered as a condition precedent for opening up the economy and therefore needs no more emphasis.<sup>12</sup> While it solves the problem of accessibility of remote and isolated areas and thereby ushers in buoyancy in market for local products, all the same, it provides sizeable employment<sup>13</sup> also to the people during the construction phase. Development of road transportation has hitherto been meagre in the hilly areas of the State<sup>14</sup>. It may be pointed-out that since the population in the hills is

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<sup>12</sup>Planning Department, Uttar Pradesh, 'Draft Annual Plan' 1983-84, Vol.I, p.129.

<sup>13</sup>Zutshi, Y.N., 'Road Network in U.P. Hills' paper presented in 'Seminar on Development of Hill Areas', held at Nainital 21-24 April, 1980. He estimates that through road construction activity alone employment for about 50000 persons per year will be generated during the current plan period.

<sup>14</sup>The length of pucca roads per 1000 square kelo meter areas accounts for 105.50 in the Hill region as a whole, as against 192.55 for the State as a whole in 1978-79. This being 138.54 in Almora, barely 68.09 in Pithoragarh and 176.39 in Nainital (Development Indicators for the Economic Condition of U.P. 1980', State Planning Institute, Economics and Statistics Division, Uttar Pradesh, Table 36).

sparsely scattered in a large number of small isolated settlements, therefore, the norm like road length per unit population, as is frequently done, cannot be mechanically applied in such a profile. It is encouraging that, based on this reason, the norm under 'Minimum Needs Programme' (MNP) for rural roads has been modified as compared to the national norms, viz., coverage of 100 per cent of cluster of villages having population 500 and above and 50 per cent coverage of villages with a population between 250-500 is envisaged for the hill area.<sup>15</sup>

Availability of power has also been deficient in the region and further dismally low in Almora and Pithoragarh.<sup>16</sup> In this regard, a recent regional study has reported that the shortage of power can be met through micro-hydro electric power generation for which the hill areas of the region are particularly suited for harnessing this form of energy as they have a large number of perennial hill streams where the

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<sup>15</sup> Planning Department : 'Draft Annual Plan 1983-84', Vol.I, Uttar Pradesh, p.130.

<sup>16</sup> As against U.P.'s 32.25 per cent electrified villages to the total villages, it accounts for 21.15 per cent in the hill region as a whole and further low in Almora (18.57 per cent) and Pithoragarh (12.78 per cent). In Nainital, it amounts to 50.20 per cent in 1978-79 ('Development Indicators for the Economic Condition of Uttar Pradesh, 1980, Table 31').



necessary head and discharge of water is available.<sup>17</sup>

Efforts need to be made to harness this form of energy.

### 7.7.3 Promotional and Pecuniary Assistance

The backward areas suffer from certain disadvantages which ultimately manifest themselves in high cost and/or low revenue to the entrepreneur. This could be offset by promotional and pecuniary assistance so as to make these areas worthwhile for the industries to be located there.<sup>18</sup> In fact, availability of financial assistance is one of the important conditions in modern industrial development. In a recent study, the efforts of financial and promotional institutions are found to have significant their impact on growth of industries in certain areas even independently of the other factors.<sup>19</sup> It is, therefore necessary that more

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<sup>17</sup>Joshi, B.K. & Sinha, R.C. (1981), 'Socio-Economic Implications of Micro-Hydro Power System in India', Giri Institute of Development Studies, Lucknow, p.121. Also see Shah, S.L., 'New Approaches and Strategies for Land and Water Resource Use Planning and Management in the Hills of U.P.', in Papola, T.S., et. al., (1983), 'Development of Hill Areas : Issues and Approaches', Himalaya Publishing House, Bombay, p.407.

<sup>18</sup>Papola, T.S. & Tewari, R.T. (1981), 'Impact of Concessional Finance on Industrial Development of Backward Areas, A Study in Uttar Pradesh', Giri Institute of Development Studies, Lucknow, p.3.

<sup>19</sup>Papola, T.S., 'Spatial Diversification of Manufacturing Industries : A Study of Factory Industries in Uttar Pradesh', in T.S. Papola, et. al., 'Studies on Development of Uttar Pradesh', Giri Institute of Development Studies, Lucknow, 1979, p.208.

and more package of pecuniary assistance is made available to industrially backward hill areas. By declaring Almora and Pithoragarh as specially backward districts, the government has shown its keen interest for the industrial development of these districts. Alongwith this, industrial development of the region requires involvement and encouragement by the State agencies in the form of subsidies and heavy doses of protection in the initial stage. Without it, industrial development seems un-likely to take root.

#### 7.7.4 Provisions for Inputs

We have observed that, two main industries of the region, namely, agro-based industries and woolen textile industries have been suffering from shortage of raw material. To meet such deficiencies, raw material depots could be opened at appropriate locations. To promote the forest based industries, conservation of forests is very necessary. For this, the cessation on continued indiscriminating falling of trees needs to be imposed strictly. It is necessary not only for the development of industries but also, perhaps more important, to protect the existing ecology and environment in the region. Accordingly, the forest department should apply afforestation of denuded and community lands

through gradual encroachment. At the same time, the emphasis should be laid more on rearing than planting.<sup>20</sup>

At the same time, efforts should be made to utilise as much of produce extracted from forests as possible locally by developing necessary entrepreneurship and infrastructure for forest-based industries. The system of disposal of timber also needs to be reviewed with this end in view.

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<sup>20</sup> Planning Department, Government of U.P., 'Draft Sixth Five Year Plan 1980-85', (Review), Vol.I, p.128.

## Chapter VIII

### CONCLUSIONS : FINDINGS AND SUGGESTIONS

In the present chapter, we now recapitulate the major findings of our analysis of labour force, employment and unemployment in the Kumaon region and attempt to derive conclusions on the various aspects of these phenomena. Attempt is also made to point-out the policy implications flowing from the findings and conclusions.

#### 8.1. Population Dynamics

8.1.1 Like in any other part of the country, the population in the Kumaon region has also witnessed a steady increase during the last eighty years and has accelerated particularly during the last three decades. In fact, population growth in Kumaon has been higher than Uttar Pradesh and India, but the distinct feature of this growth is not high birth rate, but an exceptionally low death rate (12.87 per 1,000). Net-immigration to Nainital district is another important factor contributing to population growth during the post-Independence period. As regards the future prospects of population growth, though birth rate which is somewhat lower than U.P. and India, could decline further as a result of the family welfare



programmes, but it is also likely that death rate would also get reduced, with an expansion of health care facilities in the region. Therefore, there are no prospects of lower population growth in the region. Out-migration from the hill districts has shown an increasing tendency but a fast growth of Nainital district is likely to maintain its 'net-in-migration' status, thus checking any decline in the growth of population of the entire region due to net out-migration.

8.1.2 Another important feature of the Kumaon population is a very low density of the population as compared to that of U.P. and India. Further, within Kumaon itself, the density of population varies from 54 in Pithoragarh to 167 in Nainital indicating that population is settled sparsely in the hills and densely in the plains. An important reason for a low density and its uneven pattern among districts is found in the extent and pattern of urbanisation. The urban areas account for only 16 per cent of the total population of the region; but it is rather highest 28 per cent in Nainital and very low in the hilly districts of Almora and Pithoragarh (upto 6 per cent).

8.1.3. The age-composition of the population of Kumaon is characterised as bottom heavy tapering to top. The proportion of population below 15 years in the total population accounts

for about 42 per cent which has a spectacular impact on the dependency ratio. An unusually high sex-ratio is another distinct feature of the population of the region. Number of females per 1,000 males is 962 in the Kumaon as against 886 in U.P. and 935 in India. The figures are markedly higher and exceed 1,000 in Almora and Pithoragarh districts. In fact, high child population and sex-ratio are the results of the single out-migration of male adults from the hills.

## 8.2 Labour Force

8.2.1 Despite the relatively lower proportion of population in the working age-group, particularly among the males, it is significant to note that Kumaon region has witnessed a higher participation of labour force (43 per cent) than U.P. (32 per cent) and India (37 per cent). In this respect, the distinguishing feature of the labour force in the region is that while the male participation rate is almost the same as elsewhere, and is even lower in Kumaon hills - Almora and Pithoragarh, due to larger proportion of children in the male population, the participation rate among the female population is markedly higher at 35 per cent in the Kumaon as compared with 10 per cent in U.P. and 21 per cent

in India. The participation of the female labour force is further unusually higher in the hills - Almora (46 per cent) and Pithoragarh (45 per cent). It is well known that the labour force participation rates have varied from Census to Census due to change in the definition of worker which have particularly affected the female labour force. And, since female workers have a significant place in the regional, particularly in the hill economy of Kumaon, the fluctuations in participation rates have also been higher there. The fact, however, remains that the participation rate of female population has all along been significantly and consistently high in the region than in U.P. or India.

8.2.2 Partly due to higher growth of population but mainly due to higher participation rate, the labour force in the Kumaon region has experienced a much higher increase (75 per cent) than that of U.P. (34 per cent). Growth of labour force in Kumaon has, however, widely varied among the three districts : 137 per cent in Nainital, 93 per cent in Pithoragarh and 29 per cent in Almora. It is important to note that the growth of labour force in the Kumaon region has been of the order of 65 per cent of the growth of population, while in U.P., the corresponding percentage

was only 45. Further, in one hill district, namely, Pithoragarh, growth of the labour force has far surpassed the growth of population.

8.2.3 The occupational distribution of labour force is heavily lopsided and highly skewed in favour of the primary sector in which more than three - fourths of labour force are engaged. Employment in the secondary sector has only a notional existence particularly in the hill districts. No doubt, tertiary sector, particularly amorphous service sector, which is an euphemism for government and semi-government services, comes next to the primary sector in providing employment.

### 8.3 Unemployment

#### 8.3.1 Overt Unemployment

A higher rate of population growth and unusually high participation rate, however, has not resulted in a high extent of overt/open unemployment. It can not be considered a serious problem in the region in-so-far-as to the estimates based on various sources, the magnitude is found hardly 1 per cent of labour force. A very low magnitude of overt unemployment is possibly because of out-migration of a



sizeable proportion of male workers particularly in the hills - Almora and Pithoragarh. But, urban unemployment could be considered to be of a substantial magnitude as the various estimates put it around 4 to 5 per cent of the urban labour force. At the same time, it is also found out that unemployment among the educated is considerable and is mostly concentrated in urban areas.

#### 8.3.2 Under-Employment

The extent of under-employment or disguised unemployment is found to be quite high in the rural areas of the region. According to the NSS estimates, it stands at around 2 per cent. But according to our sample data, the incidence of under-employment is as high as 46 per cent of the expected days of work in a year. It is particularly acute in the case of male workers (62 per cent). On an average, a male worker has no work for over two-thirds of the days while a female worker for almost half of the year. In the case of women workers, it is found-out that they work continuously during the whole year in one or other activity and work in activities other than agriculture, such as animal husbandry and household work is perennial. In each of the working days, they work for about 11 hours. In fact, the women

workers are not under-employed, but, at least during the peak agricultural season, they are over-worked. As a result, the incidence of under-employment of women workers is almost half (32 per cent) that of the male workers.

8.3.3 Besides, it is also found-out that the under-employed are not keen to leave their village to work. This is possibly because they have some essential work both economic and non-economic, to perform at home and going outside the village to work also involves extra cost of living. Thus, most of them prefer to have some work to do in the village during their spare time and the most of them reported construction activity as their preferred job. On the other hand, the few overtly unemployed prefer to go out of their village for work and offer a wider choice of activities in which they will be willing to work.

#### 8.4 Migration

8.4.1 The analysis brings forth the fact that the continuous increase in population without corresponding outlet in employment opportunities have compelled able bodied young men to move elsewhere to eke-out their livelihood and to support those left behind. This is particularly

so in the hill districts - Almora and Pithoragarh which lost around 10 per cent of their population due to migration. However, opposite is the case in Nainital which gains population by around 20 per cent due to migration. The nature of migration is semi-permanent and male selective and migrants tend mainly from younger age-groups. Also, the stream of migration is mainly from rural to urban areas.

8.4.2 Although the basic reason of migration is economic in nature, yet what is important to note is that relatively larger holders seem more prone to migrate than the marginal holders or the landless. This could be attributed to one of the two possible reasons. One, the so called 'large' holders are also not necessarily 'rich' as most of them have a land-holding size between 2-4 acres. Thus, they also have a basic economic reason to migrate. Second, while these groups do have the necessary resourcefulness and ability of migrate, the poorest have neither the capacity to meet the cost of migration, nor necessary education and skills to expect a job on migration. An increasing tendency to migrate with increase in the educational acquisition goes to support the above contentions.

8.4.3 The selectivity of migration confining to males in their twenties obviously affects the structure of population and labour force adversely. Consequently, the population is characterised by a larger proportion of children, sex-ratio more than 1,000 and majority of women in the labour force. In-so-far-as the effect of migration on migrant households' income is concerned, it turns-out to be highly positive. On an average, remittances contribute around one-third of the total disposable income of a household. At the same time, production loss due to loss of labour force is not found significant because despite migration, the household still have workers enough to get the maximum yield from the land they possess. Thus, migration results in net benefit of a significant magnitude to the households sending out-migrants. This is so even when only regular cash remittances are taken into account not accounting for accumulated savings/<sup>of</sup> returned migrants. It is also important to note that most migrants serve in the armed forces and return with accumulated savings which are found to contribute significantly to capital formation.

## 8.5 Structural Shifts in the Labour Force

8.5.1 The sectoral distribution of labour force is heavily loaded in favour of the primary sector more particularly in the hills - Almora and Pithoragarh. But a



decline in the proportion of workers employed in the primary sector accompanied by an increase in that of the tertiary sector is observed in the course of the last three decades. Basing on this shift, a conclusion that may be drawn is that possibly the process of economic diversification has made a beginning in the region.

#### 8.6 Employment in Agriculture

8.6.1 Agriculture, however, continues to be a source of employment and livelihood for a greater proportion of people in Kumaon than in the State and the country. But it has not been a paying proposition due to relatively low productivity especially in hilly districts of Almora and Pithoragarh. The proportion of net area cultivated to total reporting area is only 16 per cent in the region. It is higher in Nainital at 29 per cent, but low in Almora at 15 per cent and Pithoragarh at 8 per cent. As a result, the land/man ratio is substantially higher in the Kumaon region (2.143) than Uttar Pradesh (1.567) and further higher in Almora (2.796) and Pithoragarh 2.670). The outstanding fact remains that the continued increase in the population unaccompanied by the lack of employment opportunities outside agriculture has only intensified the

pressure of population on land contributing to lowering the landholding size and increasing land/man ratio. The size of landholding is so tiny that a pair of bullocks is reported in use only for 12 days to cultivate a household's land in a year in the hills.

8.6.2 The nature of agriculture is consequently primarily subsistence - oriented. An overwhelming large proportion of cultivated land more especially in the hills (more than 96 per cent) is used for cereal production. No doubt, Nainital plains are not so conditioned in this respect where a sizeable proportion of cultivated land comes under commercial crops particularly sugarcane. At the same time, the uniformly high intensity of cropping in all the districts especially in Almora and Pithoragarh of the region does not necessarily lead to high productivity and income. In fact, it only reflects the attested reality that with the lack of other sources of employment and income led the people to eke-out as much as possible from that land through intensive cultivation.

8.6.3 Use of irrigation is not only very low, but also has declined in the hills - Almora and Pithoragarh during the quinquennium 1976-81. Encouragingly, in Nainital, the proportion of net area irrigated to net area cultivated

is high at 65 per cent while the corresponding figure for U.P. is 55. In fact, while virtual non-availability of irrigation facilities in the hills has deterred the use of HYV seeds and chemical fertilizers on the one hand, the tiny and scattered landholdings, among others, have withheld the application of the modern agricultural machinery especially tractors on the other. As a result, per hectare productivity of agriculture has been very low in the hills and has been declining in the recent years.

8.6.4 On the whole, now it can briefly be concluded that, in the given set up, a substantially higher labour force is engaged in agriculture than is actually needed. Nevertheless, a change in the organization, technology and cropping pattern may lead to a higher optimum level and in turn may increase employment potential in agriculture. But, an examination of factors that can lead to such changes brings forth the fact that the scope of any substantial increase in employment in agriculture is highly limited especially in the hills. Horticulture, however, may be a more productive proposition in the hills which needs concerted efforts for its optimum development.

### 8.7 Employment in Industry

8.7.1 The entire Kumaon region reported a total number of 1114 industrial units in 1981-82 of which 759 (69 per cent) are located in Nainital district. Only 11 units are in the category of large and medium of which again 7 are located in Nainital district and 2 each in Almora and Pithoragarh. This well suggests that Almora and Pithoragarh have a very low industrial base. The industrial structure is well diversified more especially in Nainital, yet the two industry-groups, agro-based and forest based alone account for 50 per cent of the total units in the region.

8.7.2 As regards employment in manufacturing sector, it has been on the increase except in household industries, which is, to a large extent, due to change in the definition of worker in 1971. The two hilly districts viz., Almora and Pithoragarh experienced a higher growth rate of employment than Nainital which is largely attributable to the predominance of small and labour intensive industrial units located there.

8.7.3 The analysis of the pattern of industrial growth brings forth the fact that capital intensity of employment has increased rapidly in the region more particularly in entirely hilly districts of Almora and Pithoragarh. This



is possibly due to the recent initiation of certain larger capital intensive units in these districts as a part of special drive to locate industries there. It is also found that increase in productivity is accompanied by the increase in fixed capital. Again, a lower increase in output and value added per worker than in capital intensity in the hills suggests that new investments in industries in the hills have not necessarily been in the value adding industries; increasing capital intensity implies that the pattern of industrial development has not been employment-oriented.

### 8.8 Concluding Observations

8.8.1 Our analysis of demographic and economic situation of the hill areas in the Kumaon region leads us to conclude that the region presents a special case of backwardness with its economy trapped in a low level equilibrium, with hardly any actual and potential linkages for expansion. Its resource potential is low and even that has not been adequately harnessed towards creating an expanding productive base within the region. The development of the region on the basis of its relationship with other areas has been constrained both by its distinct topographical character and nature of its resources. Consequently, the highly

developed agricultural economy of Nainital plains even though forming a part of the administrative region has not produced any impact on the hill economy.

8.8.2 There are only two major local resources of the hill region through which its economic interaction with other regions have been significant : human resources and forest resources. In the case of the former, out-migration has both its positive and negative effects. By providing employment and incomes elsewhere to the workers with virtually zero marginal productivity within the region, migration not only affects an optimum spatial utilization of labour, but in the present case also significantly bridges the gap between consumption and local income in the region through remittances. To a limited extent, it also helps in capital formation. At the same time, it is also seen that any further migration of male adults out of the existing stock is likely to reduce production levels in agriculture, though any addition to labour force in agriculture is also unlikely to add significantly to production levels.

8.8.3 Forest resources, to the extent they can be used without leading to adverse ecological repercussions, could be considered a potential source of employment and income in the region. The exploitation of forest resources so-far

has, however, proved of little use in this respect. Of the total income generated in this sector, almost three-fourths does not accrue to the region and flows elsewhere. To the extent necessary conditions do not exist for processing of forest resources within the region, the pattern of relationship of the hill region with other areas will continue to be exploitative and the impact of this vast sector on the employment and income situation will continue to be highly limited.

8.8.4 The reason as to why forest and other local resources cannot be utilized locally for industrial development so as to create productive employment opportunities in the region lies primarily in the lack of infrastructural facilities. Development of activities like tourism for which there is considered to be tremendous scope in view of scenic beauty and agreeable climate, is also constrained for the same reason. The programmes of inducting value adding low transport cost, engineering industries like electronics is also likely to suffer from the same handicap.

8.8.5 It is necessary to reduce the extent of this handicap to generate a high level of suitable industrial activity in the region, because the development of traditional agriculture is highly limited due to natural factors and its diversification into horticulture would also be dependent

to a very large extent on the availability of infrastructural facilities. The major item in this group of facilities consists of roads in which a sizeable expansion has, no doubt, taken place in the recent decades. It, however, did not have the desirable impact on income and employment conditions due to the lack of integration between planning of roads and planning of productive activities in the areas connected by roads.

8.8.6 A piecemeal and fragmented departmental approach is unlikely to produce desirable impact, especially in the hilly region where zone of influence of any activity is geographically very highly limited and, therefore, facility or activity in one area produces very little linkages outside the close vicinity. The approach to the planning of productive activities generates income and employment opportunities in the hills has, therefore, to be based on specifically defined areas and has to consist of an integration of infrastructure and various productive activities within the area.

8.8.7 In conclusion, it can be observed that the problem of Kumaon region is not primarily that of unemployment but of low productivity and incomes on account of the underdeveloped and virtually stagnant character of the economy.



A break from stagnation is not possible by a development strategy based primarily on agriculture. The non-development of non-agricultural productive sectors is partly accounted for by the geographical conditions of the region. But a large part of this disadvantage could be offset by innovative and purposive efforts some of which are indicated above.

# APPENDIX I

## Spatial Distribution of Sex Ratio in India, Uttar Pradesh and Kumaon Region from 1951 to 1981

Districts	T=Total R=Rural U=Urban	CENSUSES			
		1951	1961	1971	1981*
Almora	T	1044	1091	1088	1099
	R	1078	1125	1128	1136
	U	560	595	617	654
Pithoragarh	T	1020	1044	1026	1055
	R	1020	1043	1037	1079
	U	-	-	720	717
Nainital	T	716	719	798	844
	R	730	714	805	854
	U	667	737	773	818
Kumaon Region	T	927	918	941	962
	R	958	943	973	999
	U	640	708	741	789
Uttar Pradesh	T	910	909	879	886
	R	925	924	889	895
	U	820	812	821	846
India	T	946	941	930	935
	R	966	963	948	954
	U	860	845	858	880

\*Provisional

- Sources : i) Census of India, District Census Handbooks, Almora Pithoragarh and Nainital 1951, 1961 and 1971.  
 ii) Census of India, 1981, Uttar Pradesh, Paper 1 of 1981 Supplement, Provisional Population Totals.  
 iii) Census of India, 1981, Series-1, India, Paper-3 of 1981, Provisional Population Totals, Workers and Non-workers.

Note : In 1951 & 1961, there was no urban area in Pithoragarh.

## APPENDIX II

### Percentage of Workers by Rural Urban Distribution in India, Uttar Pradesh and Kumaon Region

	R=Rural U=Urban	CENSUSES		
		1961	1971	1981*
Almora	R	60.30	39.04	28.81
	U	38.09	35.33	35.64
Pithoragarh	R	59.86	40.57	37.91
	U	-	29.20	33.42
Nainital	R	51.89	34.74	32.95
	U	33.83	29.26	29.08
Kumaon Region	R	57.22	37.70	32.57
	U	34.66	30.31	30.05
Uttar Pradesh	R	40.32	31.47	29.57
	U	30.95	27.67	27.15
India	R	43.45	34.04	39.46
	U	32.89	29.04	31.41

\*Provisional

Note : The 1981 Census participation rates are based on  
on 'Main Workers' only.

Sources : i) Census of India, 1961 and 1971, Uttar Pradesh,  
General Economic Tables.

ii) Census of India, 1981, Uttar Pradesh, Paper 1 of  
1981 Supplement, Provisional Population Totals.

# APPENDIX III

## Classification of All Occupations into the Three Broad Sectors

Primary Sector	Secondary Sector	Tertiary Sector
<u>1961 Census</u>	<u>1961 Census</u>	<u>1961 Census</u>
I. Cultivators	IV. Household Industry	VII. Trade and Commerce
II. Agricultural Labourers	V. Manufacturing other than Household Industry	VIII. Transport, Storage and Communications
III. Mining, Quarrying, Livestock, Fishing, Forestry, and allied activities	VI. Construction	IX. Other Services
<u>1971 Census</u>	<u>1971 Census</u>	<u>1971 Census</u>
I. Cultivators	V (a). Manufacturing Household	VII. Trade and Commerce
II. Agricultural Labourers	V (b). Manufacturing other than Household	VIII. Transport
III. Livestock, Forestry, Hunting Orchard	VI. Construction	IX. Others
IV. Mining and Quarrying		



# APPENDIX IV

## Unemployed and Their Preferences for Job and Place of Job

Jobs Preferred	Within village	Outside village	Total
1. Worker in own occupation	8	-	9
2. Agricultural labour	1	-	1
3. Forest labourer	5	-	5
4. Construction	54	4	58
5. Trade/Business	-	41	41
6. Services	-	-	-
7. Others	-	-	-
Total	68	45	113

# APPENDIX V

## Sex-Ratio (Females to Males)

Sex-Ratio	Number of Families		Total
	With Migrants	Without Migrants	
0 - 0.5	28	27	55
0.5 - 1.0	36	43	79
1.0 - 1.5	9	12	21
1.5 - 2.0	15	7	22
2.0 & Above	15	8	23
Total	103	97	200
Average Sex-Ratio	1085	918	1075

# APPENDIX VI

## Percentage Distribution of Main Workers into Different Occupations in Kumaon, Uttar Pradesh, 1981 (Provisional)

	P M F	Almora			Pithoragarh			Nainital			Kumaon Region			Uttar Pradesh		
		T	R	U	T	R	U	T	R	U	T	R	U	T	R	U
I. Cultivators	P	75.19	80.95	2.25	82.25	86.05	9.90	45.05	58.50	5.10	62.67	73.02	5.07	58.01	67.93	8.86
	M	36.75	39.58	0.85	39.52	41.31	5.64	37.62	48.69	4.87	37.81	43.82	4.36	53.50	62.61	8.35
	F	38.44	41.37	1.40	42.73	44.74	4.26	7.43	9.87	0.23	24.86	29.20	0.71	4.51	5.32	0.47
II. Agricultural Labourers	P	1.83	1.93	0.36	0.78	0.78	0.76	18.73	22.20	8.48	9.53	10.03	6.73	16.32	18.33	6.37
	M	1.14	1.20	0.33	0.57	0.57	0.62	16.34	19.29	7.61	8.16	8.54	6.04	13.02	14.47	5.85
	F	0.68	0.73	0.03	0.21	0.21	0.14	2.39	2.91	0.87	1.37	1.49	0.69	3.30	3.86	0.52
V(a) Household Industry, Manufacturing, Processing, Repairs	P	2.28	2.15	4.05	2.40	2.14	7.40	3.06	1.82	6.75	2.68	2.00	6.42	4.39	3.11	10.76
	M	2.02	1.89	3.74	1.57	1.38	5.01	2.85	1.62	6.48	2.30	1.64	5.98	3.82	2.66	9.57
	F	0.26	0.26	0.31	0.83	0.76	2.39	0.21	0.20	0.27	0.38	0.36	0.44	0.57	0.45	1.19
III, IV, V(b) & VI to IX Other Workers	P	20.70	14.97	93.34	14.57	11.03	81.94	33.16	17.42	79.67	25.12	14.95	81.78	21.28	10.63	74.01
	M	19.55	14.23	87.02	13.72	10.46	75.63	31.37	16.23	76.13	23.74	14.07	77.63	19.94	7.81	70.15
	F	1.15	0.74	6.32	0.85	0.57	6.31	1.79	1.19	3.54	1.38	0.88	4.15	1.33	0.82	3.86
Total (I+II+V(a)+III+IV+V(b)+VI to IX		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source : Computed from Census of India, 1981, Series 22, Uttar Pradesh, Paper - 1 of 1981, Supplement, Provisional Population Totals, pp.122-123.

## APPENDIX VII

### List of Industries which can Successfully Operate in the Kumaon Region

Name of Industry	Capital Invest- ment (Rs. in lakh)		Total (in lakh Rs.)	Employ- ment
	Machinery & Tools	Working Capital		
1	2	3	4	5
<b><u>1. Agro-Based Industries</u></b>				
1. Flour Mills	0.15	0.15	0.30	3
2. Fruit Conservation	0.50	0.75	1.25	10
3. Soyabean Products	4.50	4.00	8.50	25
4. Beckary	0.10	0.10	0.20	6
5. Dehidration of Vegetables	1.00	0.75	1.75	10
6. Mini Rice Plant	0.60	3.25	3.85	12
<b><u>2. Forest-Based Industries</u></b>				
1. Pecking Case	0.15	0.30	0.45	6
2. Wooden Furniture	0.15	0.30	0.45	6
3. Match Sticks	2.00	1.50	3.50	20
4. Paper Pulp	7.00	5.00	12.00	50
5. Pine Oil	5.00	5.00	10.00	50
6. Carpenter Unit	0.03	0.05	0.08	3
7. Wooden Toys	0.03	0.02	0.05	3
8. Wooden Material for Electric fitting	0.05	0.05	0.10	3
9. Handloom	0.15	0.20	0.35	5
<b><u>3. Livestock-Based Industries</u></b>				
1. Bone Crushing	0.50	2.00	2.50	15
2. Shoe Making	0.03	0.05	0.08	2
3. Leather Fancy Material	0.03	0.10	0.13	4
<b><u>4. Textile Industries</u></b>				
1. Woolen Clothes and Carpets	0.10	0.10	0.20	5
2. Readymade Garments	0.10	0.10	0.20	5
3. Hosery Goods	0.20	0.50	0.70	6
4. Sewing Thread Reel	0.05	0.10	0.15	5
<b><u>5. Chemical Based Industries</u></b>				
1. Soap	0.15	0.25	0.40	6
2. Candle	0.10	0.10	0.20	5
3. Varnish	0.20	0.20	0.40	10

Contd..../-



	1	2	3	4	5
<b>6. Engineering and Allied Industries</b>					
1. Auto Industries		0.50	0.10	0.60	6
2. Steel Furniture		0.20	0.50	0.70	6
3. Agricultural Implements		0.25	0.50	0.75	6
4. Transformer		0.25	1.20	1.35	10
5. Copper Utensils		0.05	0.10	0.15	4
6. Aluminium Utensils		2.00	2.00	4.00	40
<b>7. Mineral Industries</b>					
1. Lime		0.20	1.25	1.45	15
2. Soap Stone Powder		1.00	1.25	2.25	25
3. Slate Pencil		0.06	0.15	0.21	8
4. Chock Stick		0.02	0.02	0.04	3
<b>8. Other Industries</b>					
1. Incense		0.02	0.20	0.22	6
2. P.V.C. Shoes & Chappal		1.00	1.00	2.00	15
3. Paint Varnish		0.40	1.30	1.70	15
4. Pharmaceutical		0.70	1.25	1.95	10
5. Plastic Products		0.50	1.00	1.50	10
6. Stationary Material		0.25	0.30	0.55	6
7. Card Board Packets		0.25	0.10	0.27	7
8. Paper Envelopes and Bags		0.20	0.35	0.55	3
9. Toffy Chowklete		0.05	0.05	0.10	3

Source : 'marg Darshika' : Industrial Development and Possibilities in the Kumaon Region', (1981-82), Industry Department, Kumaon Division, Nainital, pp.55-57.

# APPENDIX VIII

## Total Number of Industrial Cooperative Societies Upto 31.3.1983 in the Kumaon Region

	Almora	Pithora- garh	Nainital	Kumaon Region
1. Carpet and Sowl Manufacture	3	3	-	6
2. Capper Utensils	6	3	-	9
3. Cloth Printing	-	1	19	20
4. Knitting and Sewing	4	2	6	12
5. Bamboo/Mat Manufacture	3	-	2	5
6. Readymade Garments	-	-	1	1
7. Leather Art	-	-	1	1
8. Miscellaneous	9	5	7	21
Total	25	14	36	75

Source : 'Audhyogik Margdarshika : Kumaon Ke Audhyogikaran  
Hetu Karyakram, Subidhayai and Pragati' (in Hindi),  
May 1983, Joint Director Industries, Kumaon Division,  
Nainital, op. cit., 4.

APPENDIX IX

QUESTIONNAIRE FOR HOUSEHOLD SURVEY ON EMPLOYMENT,  
UNEMPLOYMENT AND MIGRATION

Topic : "Labour Force, Employment and Unemployment in a  
Backward Economy : A Study of the Kumaon Region  
in Uttar Pradesh", (For Ph.D. Degree, Kumaon  
University, Nainital)

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(Kumaun University)  
N A I N I T A L

Short-term ICSSR Doctoral Fellow at the Gird Institute of  
Development Studies, Lucknow, June 1982

# QUESTIONNAIRE

## Household Survey

### 1. Identification

- 1.1 Name of the head of the household
- 1.2 Caste
- 1.3 Village
- 1.4 Block
- 1.5 District

### 2. Demographic Structure

- 2.1 Composition of the household (only those living with the household but including students living in hostels)

Sl. No.	Name of the person	Relation to head	Sex	Age	Marital Status	Education	Activity Status*	Occupation	
								Main	Subsidiary
1.									
2.									
3.									
4.									
5.									
6.									
7.									
8.									
9.									
10.									
11.									
12.									
13.									
14.									
15.									

\* Child, Student, Working, Unemployed, Housewife, Disabled, Retired.



3. If family occupation is farming, please give information about land and crop grown during the last agricultural year :

3.1 Possession of land (in acres)

- i. Total land owned
- ii. Cultivated area
  - a. Cultivated once
  - b. Cultivated twice
- iii. Leased in land
- iv. Leased out land
- v. Net irrigated area

3.2 Crops grown during the last agricultural year :

Sl. No.	Name of the crop	Irrigated	Unirrigated	Total Output (in Quintals)		Total	
				Consumption Qty. Value per quintal	Sale Qty. Value per quintal	Quantity	Value
1.							
2.							
3.							
4.							
5.							
6.							

#### 4. Livestock Information

Livestock Category	Number	Present Value Rs.	Production/Income (Self-consumed Sale)				Hiring out charges Rs. (1)
			Milk litre	Milk Value per litre	Milk Products	Meat (8.9)	
1. Bullock							
2. Cow (Milch)							
3. Calves :							
Male							
Female							
5. Draft Buffalo							
6. Milch Buffalo							
7. Buffalo below 3 years							
Male							
Female							
8. Goat							
9. Poultry							
10. Any other							

## 5. Details of family workers (only those included in Table 2.1)

No. of workers	Activity*	Place of Work		Intensity of Activity for the last one year (1981-1982)				Total No. of days in wages and salary earners only each activity	In cash	In kind	Total	
		Own villa-ge	other villa-ge (dis-tance km.)	Urban area (dis-tance km.)	June 1981 to Aug. 1981							
					Sept. 1981 to Nov. 1981	Dec. 81 to Feb. 1982	March to May 1982					
1	1.											
	2.											
	3.											
2	1.											
	2.											
	3.											
3	1.											
	2.											
	3.											
4	1.											
	2.											
	3.											
5	1.											
	2.											
	3.											
6.	1.											
	2.											
	3.											
7	1.											
	2.											
	3.											

Activity Code\*: 1. Cultivation on own farm, 2. Cultivation on other farm, 3. Agricultural labour, 4. Dairy, 5. Other allied agricultural activity, 6. Non-agricultural labour, 7. Business, 8. Household type industry, 9. Construction, 10. Transport, 11. Service.

5.1 If you do not have work throughout the year

i) Would you like to work during your leisure period?

(a) If yes, give the following information :

Place of work (preference) :

- i. Within the village
- ii. Outside the village (distance)

(b) Job preference as :

- i. Worker in own occupation
- ii. Agricultural labour
- iii. Forest labour
- iv. Construction
- v. Trade/Business
- vi. Services
- vii. Others (specify)

II) If not, Why? (Reasons(s) )

- i.
- ii.
- iii.
- iv.
- v.



## 6. Time disposition of female worker during the last one year (1981-82)

Sl. No. of Female Workers	Activity	Seasons (Average hours per day)				March 1982 - May 1982
		June 1981	Sept. 1981	Dec. 1981-Feb. 1982		
		Aug. 1981	Nov. 1981			
1	1. Cultivation work 2. Household work 3. Animal Husbandry 4. Child rearing 5. Any other					
2	1. Cultivation work 2. Household work 3. Animal Husbandry 4. Child rearing 5. Any other					
3	1. Cultivation work 2. Household work 3. Animal Husbandry 4. Child rearing 5. Any other					
4	1. Cultivation work 2. Household work 3. Animal Husbandry 4. Child rearing 5. Any other					
5	1. Cultivation work 2. Household work 3. Animal Husbandry 4. Child rearing 5. Any other					

7. Has any member of the household migrated outside the village (excluding seasonal, short-term migration, marriage migration and students)? Yes ☐ No ☐

If yes, then please give the following information :

Name of the Migrant	Sex	Age at migration	Education at migration	Marital status at migration	Month/year of migration	Place of migration (distance)	Nature of work engaged in	Wages/Salary	Remittances received from during the last year	Activity* status before migration	Reasons+ for migration	Prospects of job on migration
1.												
2.												
3.												
4.												
5.												
6.												
7.												
8.												

Code \* 1. Worker

2. Student

3. Unemployed

Code + 1. No work available at all

2. Work only irregularly available

3. Inadequate income

4. Attraction of city life

5. Any other (specify)

1. Job fixed for him

2. Assurance for a job

3. A hope to find a job

7.1 How did you utilise the remittances received from migrants during the last two years?

1. Current consumption
2. Building construction
3. Land purchasing
4. Household durables
5. Ornaments
6. Deposits
7. Loan to other @ interest
8. Any other (specify)

7.2 Did any member of your family go out of the village to work during the period there was no work at home?

Sl. No.	Name of the Person	Sex	Age	Marital status	Period of Migration		Place of migration (name & distance)	Activity*	Wages salary received	Net Income brought Rs.
					From	To				
1.										
2.										
3.										
4.										
5.										

\* Activity code of the table 5.

## 7.3 Visits home by migrants during the last two years

Sl. No.	Year	None	Visits				Duration of visits	Month of visits	Purpose of* visits
			1	2	3	4			
1.									
2.									
3.									
4.									
5.									

Code \* 1. to help in family enterprise  
 2. to buy/sell/repair family property  
 3. to attend ceremonies  
 4. to visit relatives  
 5. any other (specify)



## 7.4 Information of those migrants who have returned to their native village

Sl. No.	Name of the person	Age at return	Period of last occupation stay away from village	Earning from last occupation	Retirement benefits, if any	Occupation	Activity	Income	*Use of retirement benefits in (use code)

1.  
2.  
3.  
4.

\* Codes 1. Current consumption; 2. Building construction; 3. Land purchasing;  
4. Household durables; 5. Ornaments; 6. Deposits; 7. Loan to others on interest;  
8. Any other (specify)

7.5 After returning to the village, did you start/propose to start any productive activity, other than that run by your family occupation?

Yes ☐

No ☐

If yes, then please give the following information :

Name or Nature of the activity (Reasons for choosing this, Location)

i. Similar to work done while away from home (specify)

ii. Within the village

iii. Potential assessed to be good (specify)

iv. Outside the village (distance from village)

Any other

Investment actual/estimated employment (other than yourself)

Have you employed or would you employ somebody in your occupation? If yes,

Family Labour		Hired Labour		Wages/salary per day per month
Number	Sex	Number	Sex	

7.5 Income from the

Turnover		Expenses			Tool	Income (Rs.)
Quantity	Value Rs.	Wages	Salary	Material	Others	

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